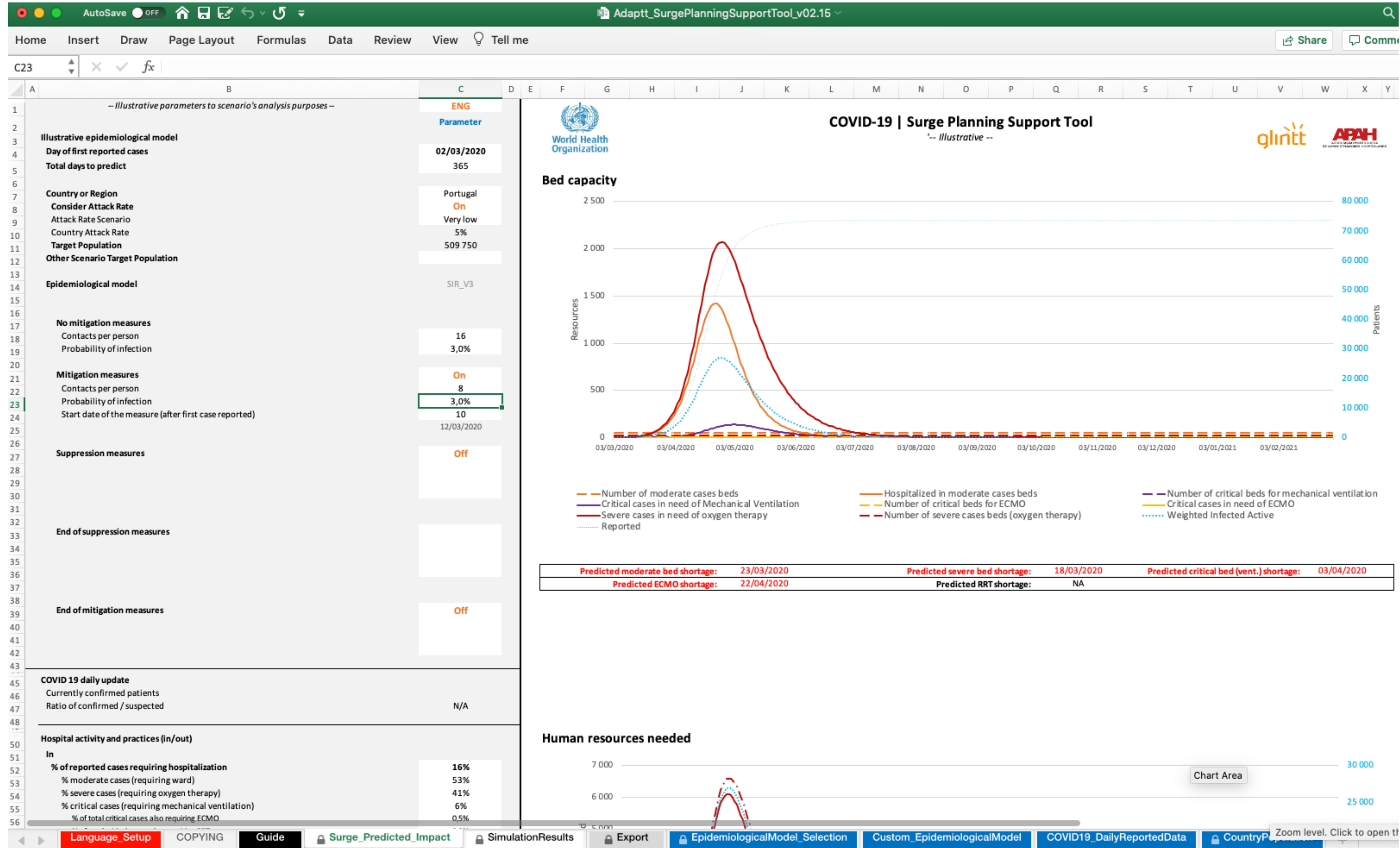


Adaptt_sprt v.2.15

Surge Planning Support Tool
instructions





Adaptt_SurgePlanningSupportTool_v02.15

Home Insert Draw Page Layout Formulas Data Review View Tell me Share Comments

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Tab Guidelines

Language Setup	Tab to update language improvements and /or to insert new languages' configuration in the tool
Surge Predicted Impact	Main tab: Allows the calibration of the epidemiological model and parametrization of the simulation one. Shows the graphical results of the predictions and the predicted day of shortage
SimulationResults	Tab to consult the detailed results of each variable in the graphics for the scenario analysis parametrized in CAPACITY IMPACT MODEL
Export	Tab with information to export to Health Workforce Estimator (HWFE) tool
EpidemiologicalModel Selection	Tab to select the tab to be used as source of the epidemiological model prediction results to consider in the capacity simulation analysis
Custom EpidemiologicalModel	Tab to update with the results from the prediction Epidemiological Model being used by each country
COVID19 DailyReportedData	Tab to update the reported cases on the considered scenario (country or region)
CountryPopulation	Tab to validate the 2020 World Bank reported data on countries population

Navigation Bar: Language_Setup COPYING Guide Surge_Predicted_Impact SimulationResults Export EpidemiologicalModel_Selection CustomEpidemiologicalModel

Adaptt_SurgePlanningSupportTool_v02.12

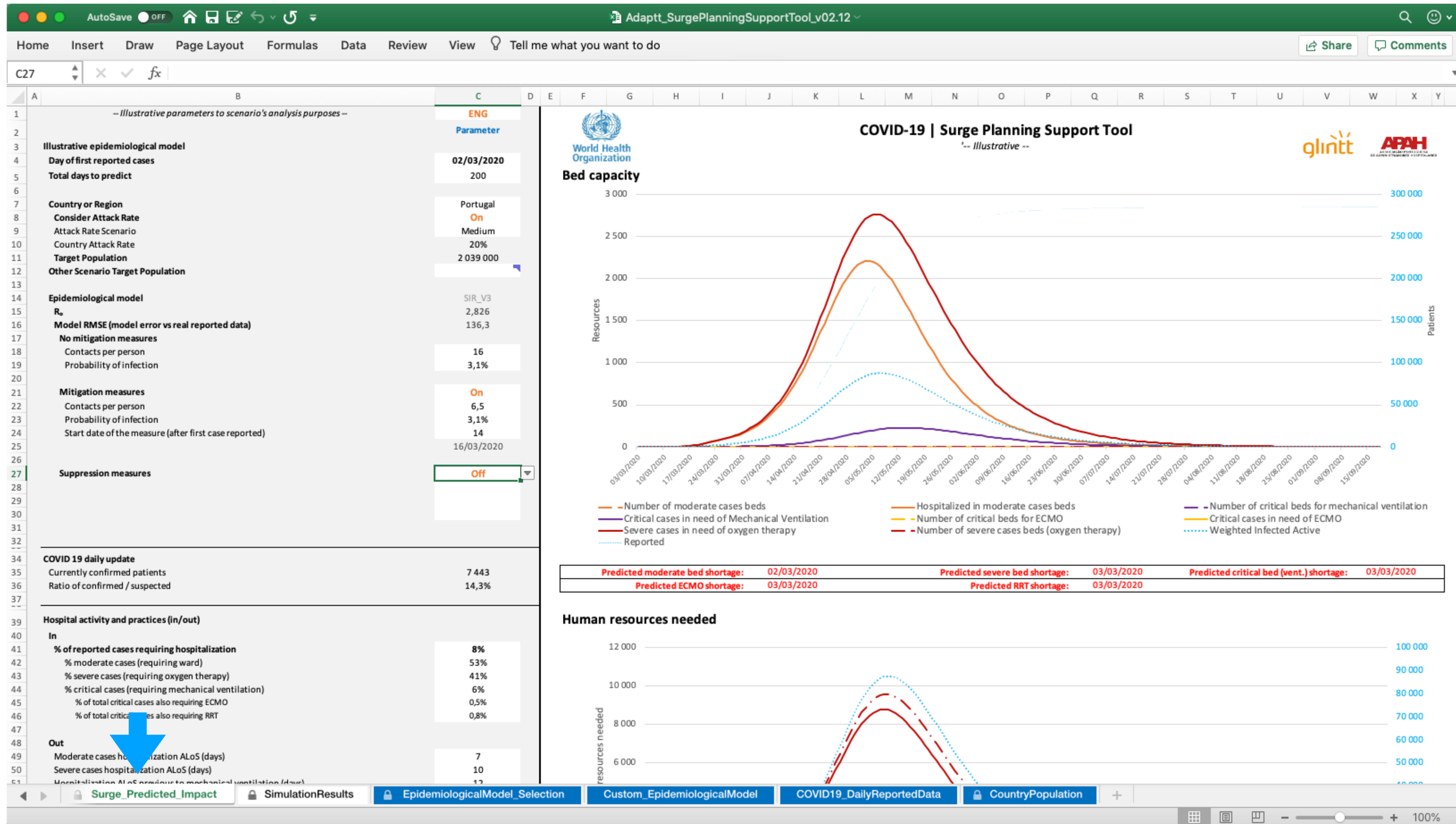
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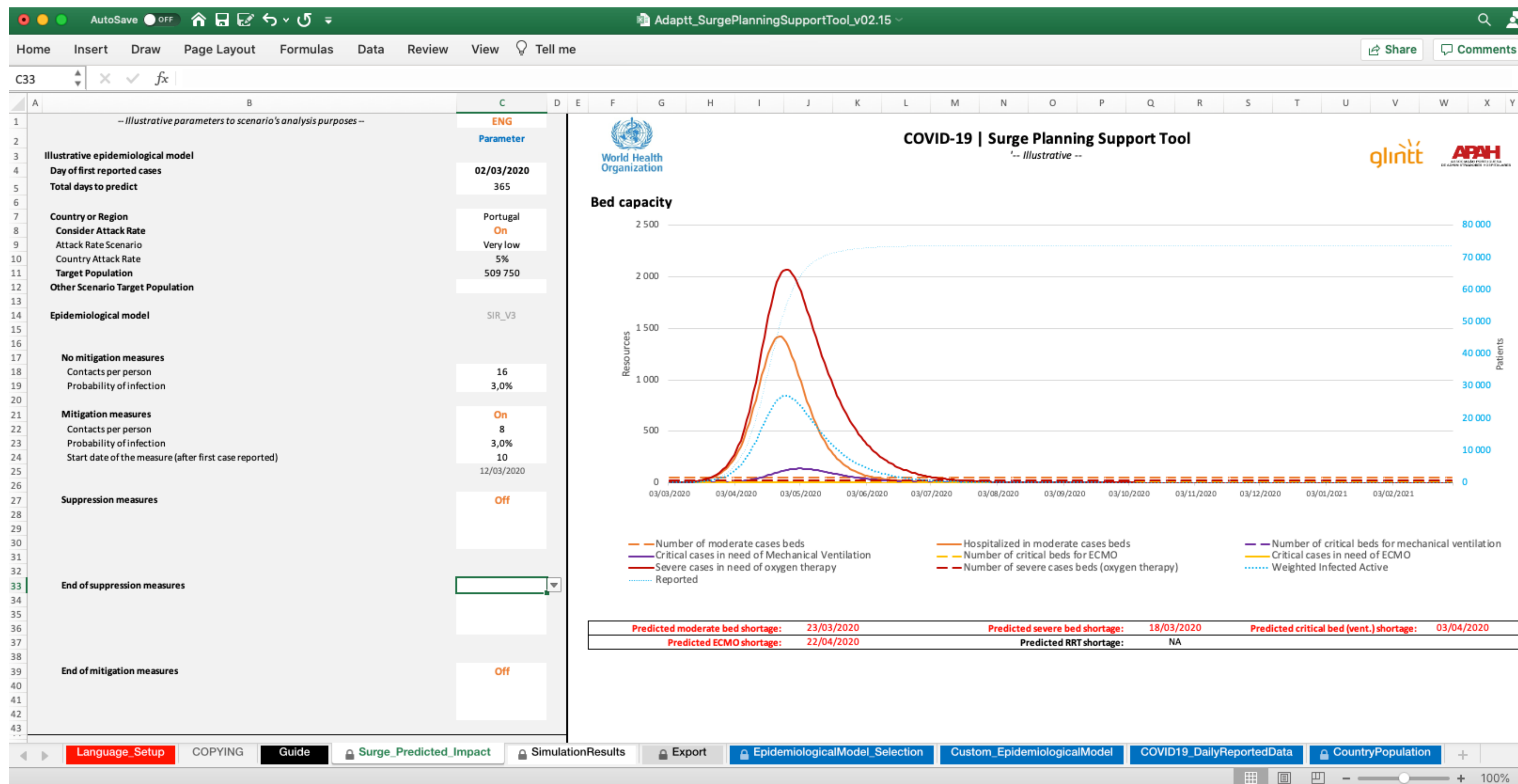
	A	B	C	D	E	F	G	H	I
1	T	Daily Predicted Active Infected	Daily Predicted New Infected	Cumulative Reported Infected					
2	0								
3	1								
4	2								
5	3								
6	4								
7	5								
8	6								
9	7								
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46	44								

EpidemiologicalModel_SelectionCustom_EpidemiologicalModelCOVID19_DailyReportedData

100%



The epi model embedded on the tool is for illustrative purposes only
Please use your own epi data as shown in slide 4



	A	B	C	D	E
39		Hospital activity and practices (in/out)			
40		In			
41		% of reported cases requiring hospitalization	5%		
42		% moderate cases (requiring ward)	53%		
43		% severe cases (requiring oxygen therapy)	41%		
44		% critical cases (requiring mechanical ventilation)	6%		
45		% of total critical cases also requiring ECMO	0,5%		
46		% of total critical cases also requiring RRT	0,8%		
47					
48		Out			
49		Moderate cases hospitalization ALoS (days)	7		
50		Severe cases hospitalization ALoS (days)	10		
51		Hospitalization ALoS previous to mechanical ventilation (days)	12		
52		Critical cases mechanical ventilation stepdown ALoS (days)	7		
53		Critical cases mechanical ventilation ALoS (days)	8		
54		Critical cases ECMO ALoS (days)	10		
55		Critical cases in need of RRT (Equipment/Patient/ Day)	1,0		
56					
57		Average Fatality rate	1,50%		
58					
60		Installed capacity (to COVID patients)			
61		Number of moderate cases beds			
62		Number of severe cases beds (oxygen therapy)			
63		Number of critical beds for mechanical ventilation			
64		Number of critical beds for ECMO			
65		Number of critical beds for RRT			
66					

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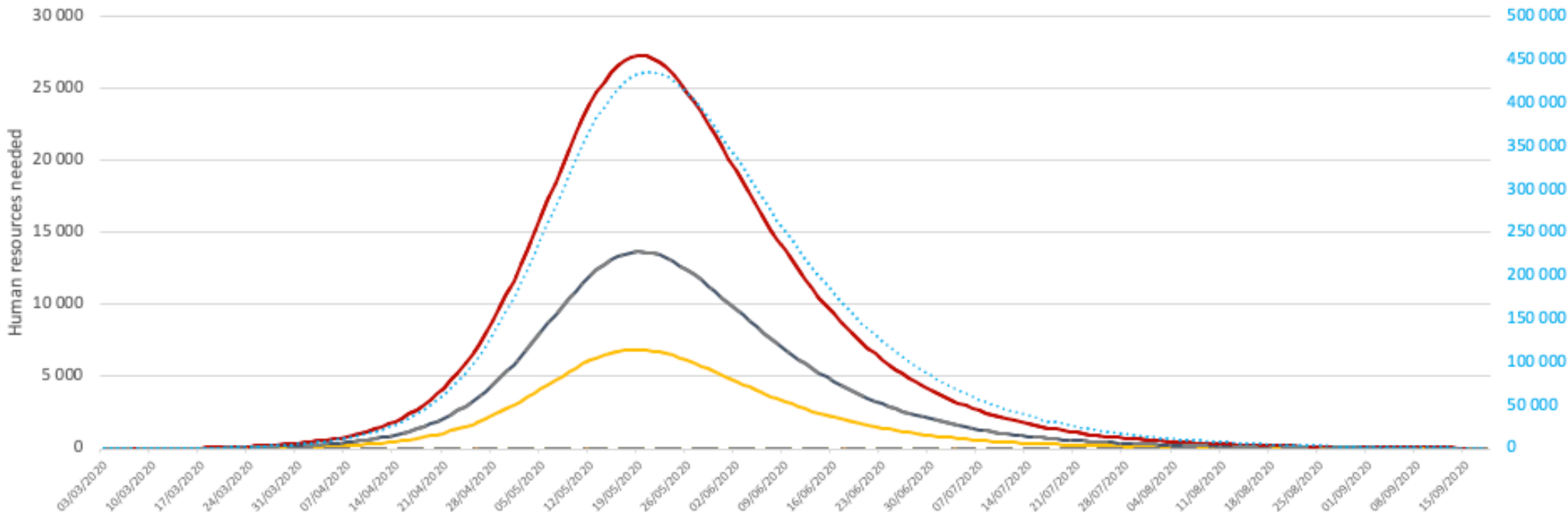
A	B	C	D	E
66				
67				
68	Human resources *			
69	Medical practitioner			
70	Moderate inpatients/ Medical practitioner 2211, 2240, 2212 FTE	3,0		
71	Severe inpatient (oxygen therapy) / Medical practitioner 2211, 2240, 2212 FTE	2,0		
72	Critical inpatients mechanically ventilated / Specialist medical practitioner (ICU) 2212 FTE	2,0		
73	Critical ECMO inpatients/ Specialist medical practitioner (ICU-ECMO) 2212 FTE	2,0		
74	Critical RRT inpatients/ Specialist medical practitioner (ICU-RRT) 2212 FTE	4,0		
75				
76	Nursing professionals			
77	Shift configuration			
78	Shift duration per Day per Nurse (h)	8		
79	Maximum shifts per Week per Nurse	4		
80	Ratios			
81	Moderate inpatient/ Nursing professional 2221, 3221 (Ward)	4,0		
82	Severe inpatient (oxygen therapy) / Nursing professional 2221, 3221 (ward)	3,0		
83	Critical inpatients mechanically ventilated/ Nursing professional (ICU) 2221	1,0		
84	Critical ECMO inpatients/ Nursing professional (ICU-ECMO) 2221	1,0		
85	Critical RRT inpatients/ Nursing professional (ICU-RRT) 2221	1,0		
86				
87	Healthcare assistant, includes nursing and medical assistants			
88	Shift configuration			
89	Shift duration per Day per Healthcare assistant (h)	8		
90	Maximum shifts per Week per Healthcare assistant	4		
91	Ratios			
92	Moderate inpatient/ Healthcare assistant (Ward) 3221, 5321, 3256	8,0		
93	Severe inpatient (oxygen therapy) / Healthcare assistant (Ward) 3221, 5321, 3256	6,0		
94	Critical inpatients mechanically ventilated/ Healthcare assistant (ICU) 3221, 5321, 3256	2,0		
95	Critical ECMO inpatients/ Healthcare assistant (ICU-ECMO) 3221, 5321, 3256	2,0		
96	Critical RRT inpatients/ Healthcare assistant (ICU-RRT) 3221, 5321, 3256	2,0		
97				
98				

Surge_Predicted_Impact

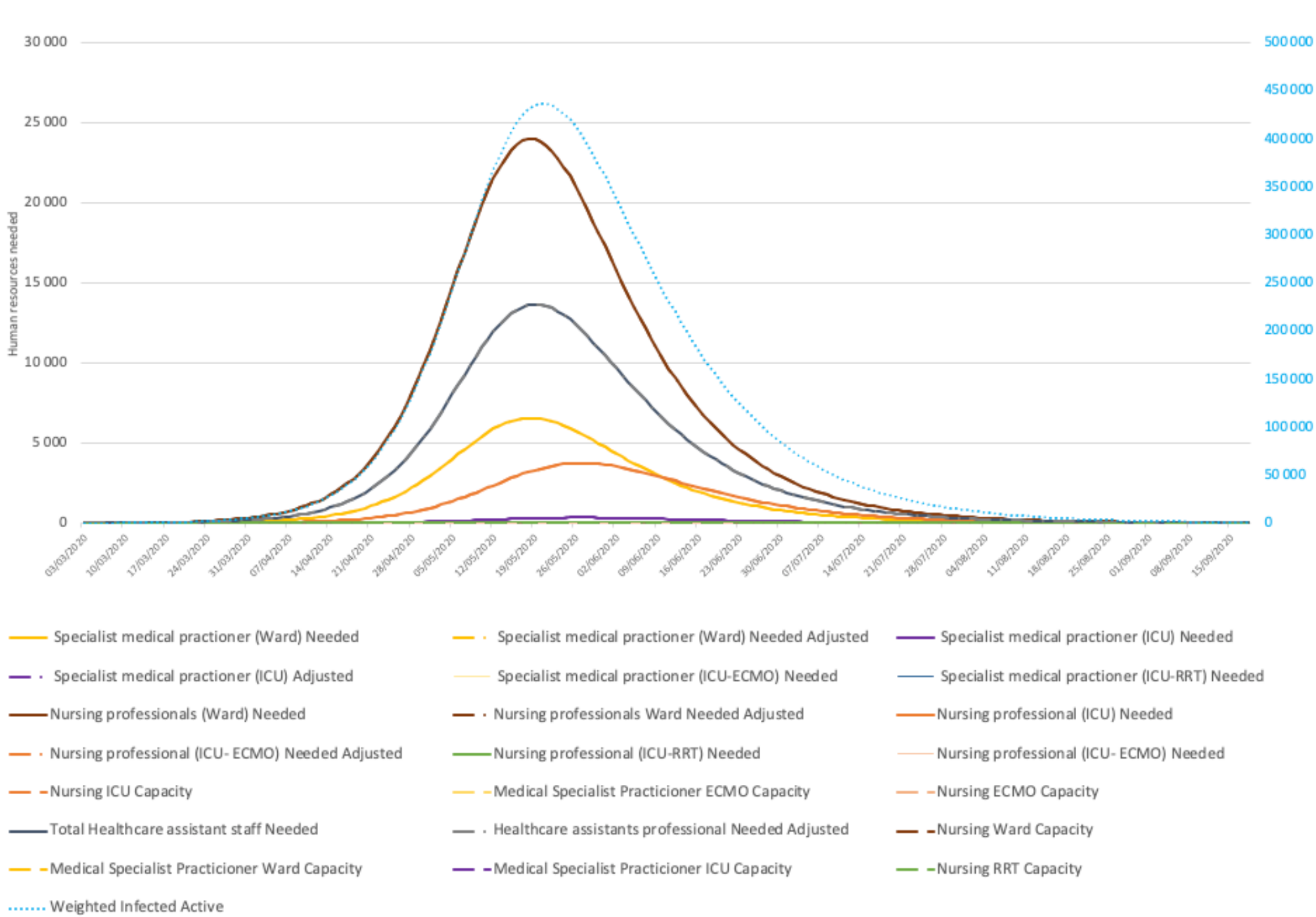
SimulationResults

EpidemiologicalModel_Selecti

Human resources needed



Human resources needed by skill



HR capacity (to COVID patients)

Nursing professionals

Nursing professional 2221, 3221 (ward)

20 000

Nursing professional (ICU) 2221

10 000

Nursing professional (ICU-ECMO) 2221

1 000

Nursing professional (ICU-RRT) 2221

2 000

Medical practitioners

Medical practitioner 2211, 2240, 2212

10 000

Specialist medical practitioner (ICU and ICU-RRT) 2212

2 500

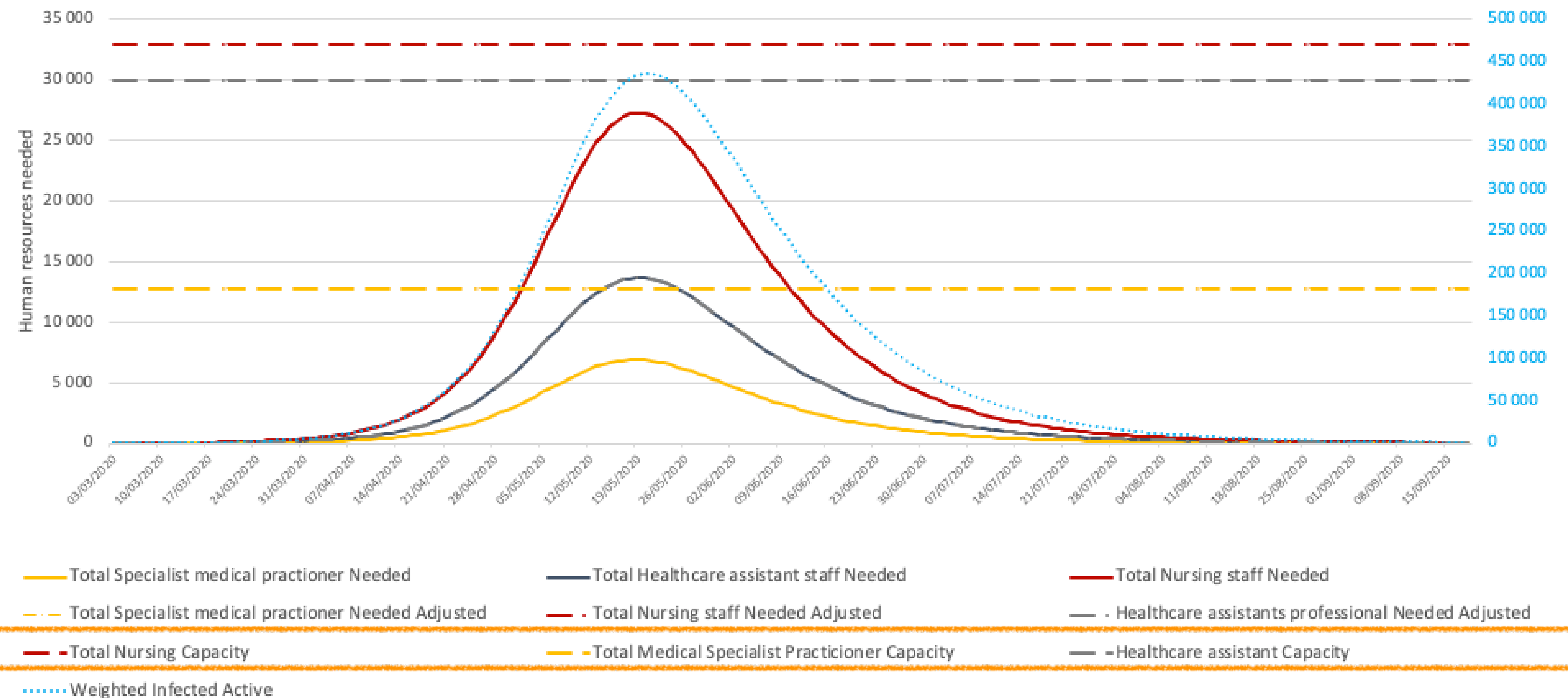
Specialist medical practitioner (ICU-ECMO) 2212 FTE

200

Healthcare assistant

30 000

Human resources needed



HR occupational risk

Daily Probability of Infection by Health Professionals

Number of days in Quarantine or Sick Leave

Average HR ratio in quarantine / sick leave

Nursing professionals

Medical practitioners

Healthcare assistant

5,00%

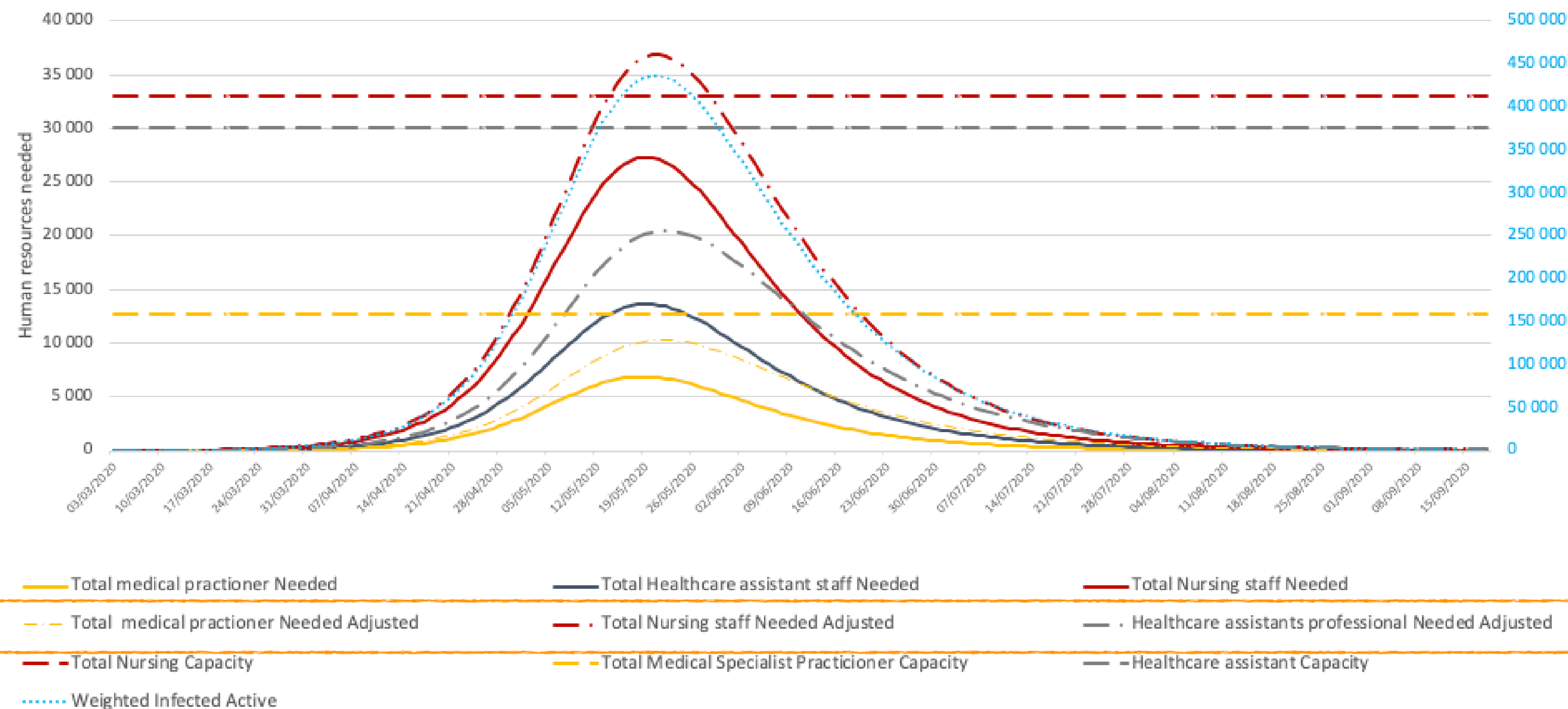
14

7,4%

8,0%

6,9%

Human resources needed

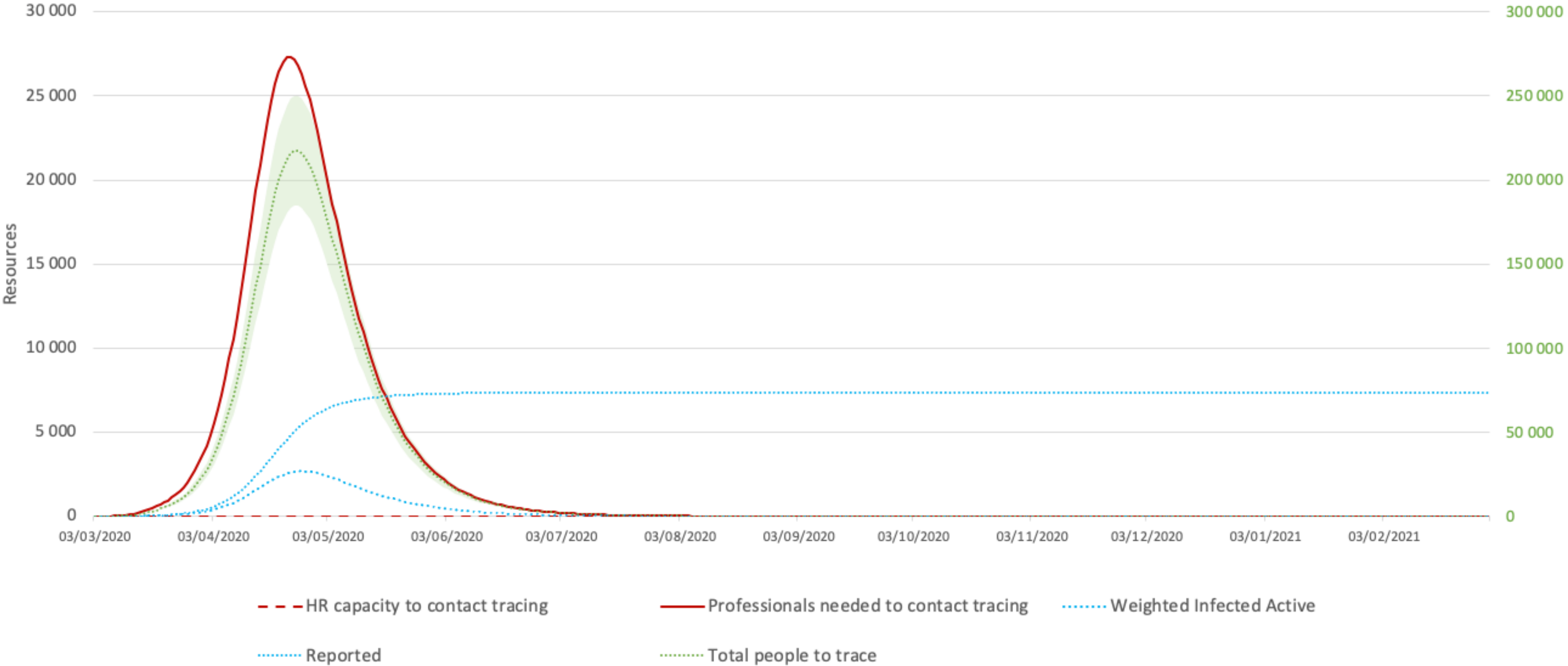


Human resources to contact trace & Home care follow-up

Contact tracing	
Ratio of Suspected cases / Active patients	10,0
Ratio error deviation	15,00%
ALoS contact trace	10,0
Suspected patients / Contact tracer professional (First day)	3,0
Sensitive Analysis (+ X Suspected patients / Contact tracer professional)	1,0
Suspected patients / Contact tracer professional (Following days)	10,0
Sensitive Analysis (+ X Suspected patients / Contact tracer professional)	10,0

Home care follow-up	
% of hospital discharge patients requiring follow-up	
Deviation	
% of mild cases followed exclusively at home	
ALoS of follow-up (days)	
Mild patients in follow-up / Healthcare profession	

Contact tracing



1 additional patient / contact tracer, allows a 2322 saving in the maximum professionals needed for 1st contact tracing25%

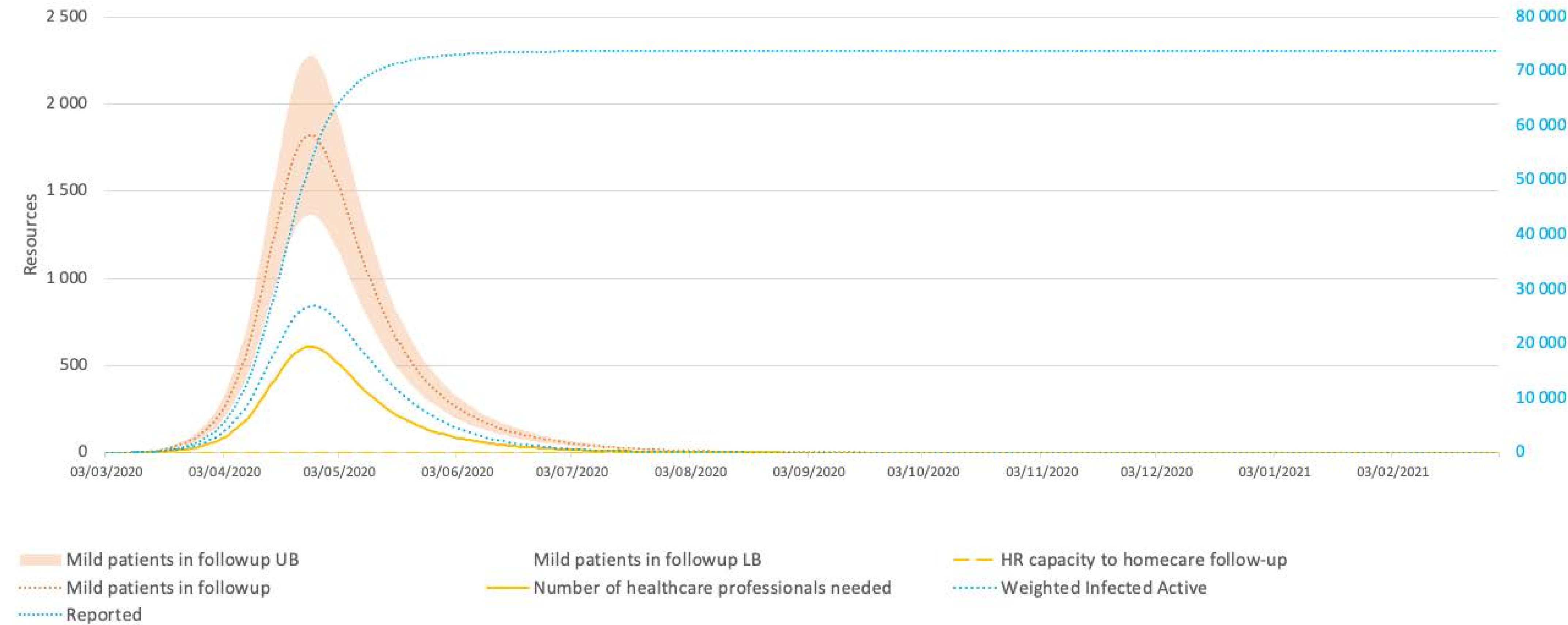
10 additional patient / contact tracer, allows a 9787 saving in the maximum professionals needed for tracing contacts of suspected patients in following days50%

Home care follow-up

% of hospital discharge patients requiring follow-up at home
Deviation
% of mild cases followed exclusively at home
ALoS of follow-up (days)
Mild patients in follow-up / Healthcare professional

5,00%
25,00%
10,00%
20
3,0

Homecare follow-up



HR capacity to contact trace & Home care follow-up

Contact tracing

Home care follow-up

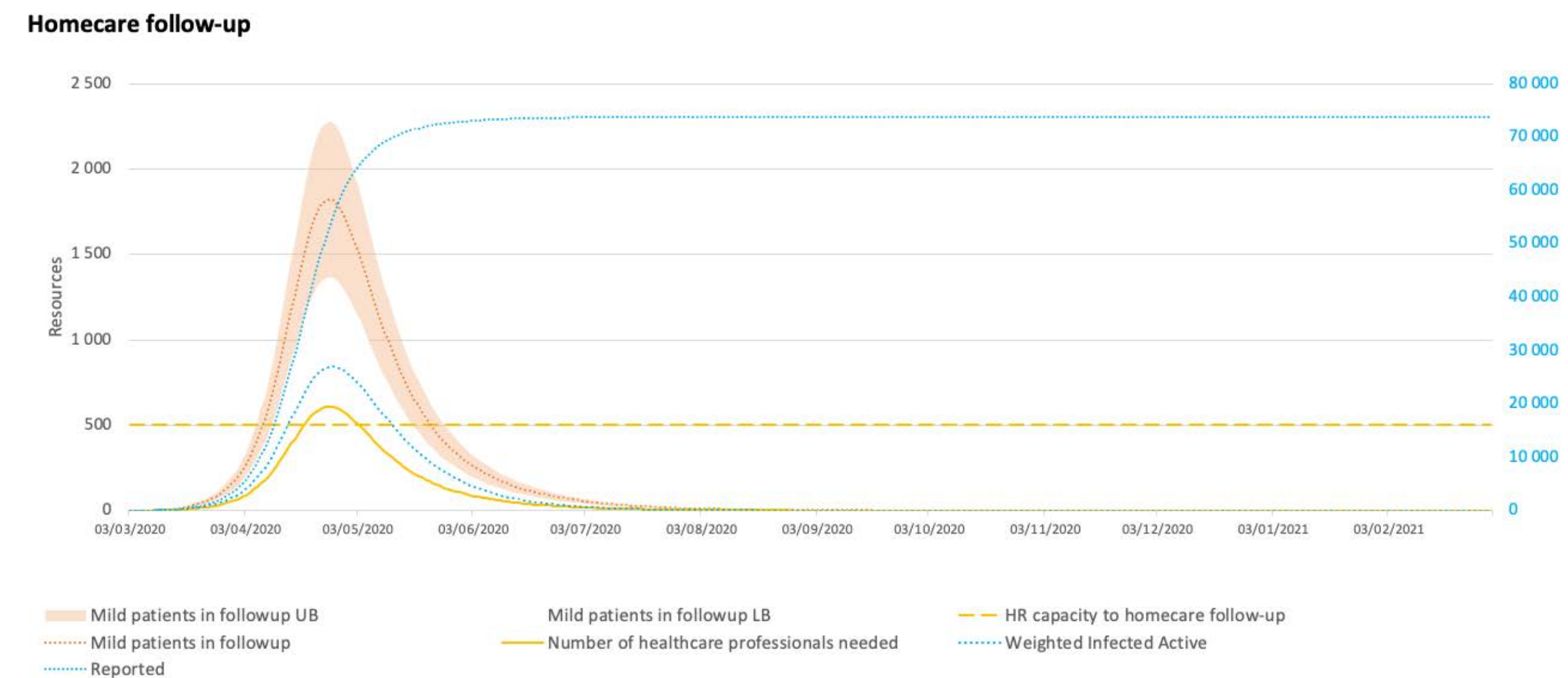
22 000

500

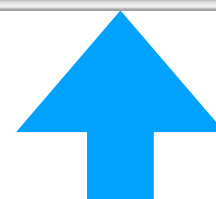


1 additional patient / contact tracer, allows a 2322 saving in the maximum professionals needed for 1st contact tracing
25%

10 additional patient / contact tracer, allows a 9787 saving in the maximum professionals needed for tracing contacts of suspected patients in following days
50%



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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1																			
2	Day	Reported	Weighted Infected Active	Hospitalized in moderate cases beds	Severe cases in need of oxygen therapy	Critical cases in need of Mechanical Ventilation	Critical cases in need of ECMO	Critical cases in need of RRT	Nursing professionals (moderate bed) Needed	Nursing professionals (severe bed) Needed	Nursing professional (ICU) Needed	Nursing professional (ICU- ECMO) Needed	Nursing professional (ICU-RRT) Needed	Nursing professionals (Ward) Needed	Total Nursing staff Needed	Healthcare assistant professionals (moderate bed) Needed	Healthcare assistant professionals (severe bed) Needed	Healthcare assistant professional (ICU) Needed	Healthcare assistant professional (ICU- ECMO) Needed
10	08/03/2020	19	16,7	0,4	0,4	0,0	0,0	0,0	5,25	5,25	5,25	5,25	5,25	10,50	26,25	5,25	5,25	5,25	5,25
11	09/03/2020	27	23,8	0,6	0,5	0,0	0,0	0,0	5,25	5,25	5,25	5,25	5,25	10,50	26,25	5,25	5,25	5,25	5,25
12	10/03/2020	39	33,9	0,8	0,8	0,0	0,0	0,0	5,25	5,25	5,25	5,25	5,25	10,50	26,25	5,25	5,25	5,25	5,25
13	11/03/2020	56	48,3	1,1	1,1	0,0	0,0	0,0	5,25	5,25	5,25	5,25	5,25	10,50	26,25	5,25	5,25	5,25	5,25
14	12/03/2020	80	68,8	1,6	1,5	0,0	0,0	0,0	5,25	5,25	5,25	5,25	5,25	10,50	26,25	5,25	5,25	5,25	5,25
15	13/03/2020	114	98,1	2,3	2,2	0,0	0,0	0,0	5,25	5,25	5,25	5,25	5,25	10,50	26,25	5,25	5,25	5,25	5,25
16	14/03/2020	163	139,7	3,2	3,1	0,1	0,0	0,0	5,25	10,50	5,25	5,25	5,25	15,75	31,50	5,25	5,25	5,25	5,25
17	15/03/2020	232	199,0	4,6	4,5	0,1	0,0	0,0	10,50	10,50	5,25	5,25	5,25	21,00	36,75	5,25	5,25	5,25	5,25
18	16/03/2020	331	283,5	6,6	6,3	0,1	0,0	0,0	10,50	15,75	5,25	5,25	5,25	26,25	42,00	5,25	10,50	5,25	5,25
19	17/03/2020	463	395,5	9,1	8,8	0,2	0,0	0,0	15,75	15,75	5,25	5,25	5,25	31,50	47,25	10,50	10,50	5,25	5,25
20	18/03/2020	636	540,0	12,4	12,1	0,3	0,0	0,0	21,00	26,25	5,25	5,25	5,25	47,25	63,00	10,50	15,75	5,25	5,25
21	19/03/2020	856	721,5	16,5	16,1	0,4	0,0	0,0	26,25	31,50	5,25	5,25	5,25	57,75	73,50	15,75	15,75	5,25	5,25
22	20/03/2020	1 129	942,7	21,3	20,9	0,5	0,0	0,0	31,50	36,75	5,25	5,25	5,25	68,25	84,00	15,75	21,00	5,25	5,25
23	21/03/2020	1 457	1 203,9	27,0	26,6	0,7	0,0	0,0	36,75	47,25	5,25	5,25	5,25	84,00	99,75	21,00	26,25	5,25	5,25
24	22/03/2020	1 841	1 501,9	33,3	33,1	0,9	0,0	0,0	47,25	63,00	5,25	5,25	5,25	110,25	126,00	26,25	31,50	5,25	5,25
25	23/03/2020	2 276	1 829,4	40,1	40,2	1,1	0,0	0,0	57,75	73,50	10,50	5,25	5,25	131,25	152,25	31,50	36,75	5,25	5,25
26	24/03/2020	2 752	2 174,5	47,0	47,5	1,4	0,0	0,0	63,00	84,00	10,50	5,25	5,25	147,00	168,00	31,50	42,00	5,25	5,25
27	25/03/2020	3 253	2 520,4	53,5	54,8	1,8	0,0	0,0	73,50	99,75	10,50	5,25	5,25	173,25	194,25	36,75	52,50	5,25	5,25
28	26/03/2020	3 760	2 847,2	59,3	61,5	2,2	0,0	0,0	78,75	110,25	15,75	5,25	5,25	189,00	215,25	42,00	57,75	10,50	5,25
29	27/03/2020	4 332	3 216,1	66,0	69,1	2,6	0,0	0,0	89,25	126,00	15,75	5,25	5,25	215,25	241,50	47,25	63,00	10,50	5,25
30	28/03/2020	4 978	3 632,6	73,7	77,8	3,0	0,0	0,0	99,75	136,50	21,00	5,25	5,25	236,25	267,75	52,50	68,25	10,50	5,25
31	29/03/2020	5 708	4 102,7	82,5	87,6	3,5	0,1	0,0	110,25	157,50	21,00	5,25	5,25	267,75	299,25	57,75	78,75	10,50	5,25
32	30/03/2020	6 531	4 633,3	92,5	98,7	4,0	0,1	0,0	126,00	173,25	26,25	5,25	5,25	299,25	336,00	63,00	89,25	15,75	5,25
33	31/03/2020	7 461	5 231,9	104,0	111,3	4,6	0,1	0,0	136,50	199,50	26,25	5,25	5,25	336,00	372,75	68,25	99,75	15,75	5,25
34	01/04/2020	8 510	5 907,3	116,9	125,5	5,3	0,1	0,0	157,50	220,50	31,50	5,25	5,25	378,00	420,00	78,75	110,25	15,75	5,25
35	02/04/2020	9 694	6 669,1	131,6	141,5	6,0	0,1	0,0	173,25	252,00	36,75	5,25	5,25	425,25	472,50	89,25	126,00	21,00	5,25
36	03/04/2020	11 029	7 528,0	148,2	159,6	6,9	0,1	0,0	199,50	283,50	36,75	5,25	5,25	483,00	530,25	99,75	141,75	21,00	5,25
37	04/04/2020	12 535	8 496,2	166,9	180,1	7,8	0,1	0,0	220,50	320,25	42,00	5,25	5,25	540,75	593,25	110,25	162,75	21,00	5,25
38	05/04/2020	14 233	9 587,3	188,1	203,1	8,8	0,1	0,0	252,00	357,00	47,25	5,25	5,25	609,00	666,75	126,00	178,50	26,25	5,25
39	06/04/2020	16 147	10 816,4	211,9	229,0	10,0	0,1	0,0	278,25	404,25	52,50	5,25	5,25	682,50	745,50	141,75	204,75	26,25	5,25
40	07/04/2020	18 303	12 200,3	238,8	258,2	11,3	0,2	0,1	315,00	456,75	63,00	5,25	5,25	771,75	845,25	157,50	231,00	31,50	5,25
41	08/04/2020	20 732	13 757,7	269,0	291,1	12,8	0,2	0,1	357,00	514,50	68,25	5,25	5,25	871,50	950,25	178,50	257,25	36,75	5,25
42	09/04/2020	23 467	15 509,6	303,1	328,1	14,4	0,2	0,1	399,00	577,50	78,75	5,25	5,25	976,50	1065,75	199,50	288,75	42,00	5,25
43	10/04/2020	26 544	17 479,0	341,3	369,7	16,3	0,2	0,1	451,50	651,00	89,25	5,25	5,25	1102,50	1202,25	225,75	325,50	47,25	5,25
44	11/04/2020	30 005	19 691,4	384,3	416,4	18,4	0,3	0,1	509,25	729,75	99,75	5,25	5,25	1239,00	1349,25	257,25	367,50	52,50	5,25
45	12/04/2020	33 895	22 174,9	432,5	468,8	20,7	0,3	0,1	572,25	824,25	110,25	5,25	5,25	1396,50	1517,25	288,75	414,75	57,75	5,25
46	13/04/2020	38 264	24 960,2	486,5	527,5	23,4	0,3	0,1	640,50	924,00	126,00	5,25	5,25	1564,50	1701,00	320,25	462,00	63,00	5,25
47	14/04/2020	43 168	28 080,9	546,9	593,3	26,3	0,4	0,1	719,25	1039,50	141,75	5,25	5,25	1758,75	1911,00	362,25	519,75	73,50	5,25
48	15/04/2020	48 666	31 573,7	614,5	667,0	29,7	0,4	0,1	808,50	1170,75	157,50	5,25	5,25	1979,25	2147,25	404,25	588,00	78,75	5,25
49	16/04/2020	54 826	35 478,1	689,9	749,2	33,4	0,5	0,1	908,25	1312,50	178,50	5,25	5,25	2220,75	2409,75	456,75	656,25	89,25	5,25
50	17/04/2020	61 719	39 836,5	774,0	841,0	37,6	0,5	0,2	1018,50	1475,25	199,50	5,25	5,25	2493,75	2703,75	509,25	740,25	99,75	5,25
51	18/04/2020	69 422	44 694,1	867,6	943,3	42,3	0,6	0,2	1139,25	1653,75	225,75	5,25	5,25	2793,00	3029,25	572,25	829,50	115,50	5,25
52	19/04/2020	78 019	50 098,7	971,5	1 057,0	47,5	0,7	0,2	1275,75	1853,25	252,00	5,25	5,25	3129,00	3391,50	640,50	929,25	126,00	5,25
53	20/04/2020	87 599	56 100,1	1 086,6	1 183,2	53,4	0,7	0,2	1428,00	2073,75	283,50	5,25	5,25	3501,75	3795,75	714,00	1039,50	141,75	5,25
54	21/04/2020	98 255	62 749,6	1 213,7	1 322,8	59,9	0,8	0,3	1596,00	2315,25	315,00	5,25	5,25	3911,25	4236,75	798,00	1160,25	157,50	5,25
55	22/04/2020	110 087	70 099,1	1 353,9	1 477,1	67,2	0,9	0,3	1779,75	2588,25	357,00	5,25	5,25	4368,00	4735,50	892,50	1296,75	178,50	5,25
56	23/04/2020	123 195	78 200,2	1 507,8	1 646,9	75,3	1,0	0,3	1979,25	2882,25	399,00	10,50	5,25	4861,50	5276,25	992,25	1443,75	199,50	5,25
		Language_Setup		Guide		Surge_Predicted_Impact		SimulationResults		EpidemiologicalModel_Selection		Custom_EpidemiologicalModel		COVID19_DailyReportedData		CountryPopulation			



Adaptt_SurgePlanningSupportTool_v02.12 2

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Paste Cut Copy Format B I U A A Merge & Centre Conditional Formatting Format as Table Cell Styles Insert Delete

A1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																
2		Date	Percent workforce in quarantine/sick leave	Mild - does not require inpatient care	Moderate - may require inpatient care, not including oxygen therapy	Severe - requires oxygen	Critical requires critical care including mechanical ventilation	Critical cases in need of ECMO	Critical cases in need of RRT							
3		02/03/2020	N/A	2	0	0	0	0	0							
4		03/03/2020	N/A	3	0	0	0	0	0							
5		04/03/2020	N/A	4	0	0	0	0	0							
6		05/03/2020	N/A	5	0	0	0	0	0							
7		06/03/2020	N/A	8	0	0	0	0	0							
8		07/03/2020	N/A	11	0	0	0	0	0							
9		08/03/2020	N/A	15	1	1	0	0	0							
10		09/03/2020	N/A	22	1	1	0	0	0							
11		10/03/2020	N/A	31	1	1	0	0	0							
12		11/03/2020	N/A	45	2	2	0	0	0							
13		12/03/2020	N/A	64	3	2	0	0	0							
14		13/03/2020	N/A	91	4	4	0	0	0							
15		14/03/2020	N/A	129	5	5	0	0	0							
16		15/03/2020	N/A	184	7	7	0	0	0							
17		16/03/2020	N/A	262	10	10	0	0	0							
18		17/03/2020	N/A	374	15	14	0	0	0							
19		18/03/2020	N/A	532	21	21	0	0	0							
20		19/03/2020	N/A	757	30	29	1	0	0							
21		20/03/2020	N/A	1078	43	42	1	0	0							
22		21/03/2020	N/A	1533	61	59	1	0	0							
23		22/03/2020	N/A	2179	87	84	2	0	0							
24		23/03/2020	N/A	3095	124	120	2	0	0							
25		24/03/2020	N/A	4389	175	170	3	0	0							
26		25/03/2020	N/A	6213	248	240	5	0	0							
27		26/03/2020	N/A	8773	350	339	7	0	0							
28		27/03/2020	N/A	12340	492	476	10	0	0							
29		28/03/2020	N/A	17268	688	666	14	0	0							
30		29/03/2020	N/A	23989	953	925	19	1	0							
31		30/03/2020	N/A	32993	1307	1271	27	1	0							
32		31/03/2020	N/A	44761	1766	1721	37	1	1							
33		01/04/2020	N/A	59624	2339	2288	52	1	1							
34		02/04/2020	N/A	77547	3018	2967	70	2	1							
35		03/04/2020	N/A	97867	3767	3729	94	2	1							
36		04/04/2020	N/A	119112	4515	4513	123	3	1							
37		05/04/2020	N/A	139135	5167	5232	157	3	1							
38		06/04/2020	N/A	155653	5628	5798	195	4	1							
39		07/04/2020	N/A	167030	5838	6148	235	4	1							
40		08/04/2020	N/A	177700	6000	6300	270	4	1							

Language_Setup Guide Surge_Predicted_Impact SimulationResults Export EpidemiologicalModel_Selection Custom_EpidemiologicalModel

Calculate

Thank you.
For any clarification please email:
adaptt@apah.pt