

Supplementary material. Development of a framework for the economic evaluation of interventions promoting resilience in adolescents.

Table SM1. International Classification of Diseases (ICD)-9-Clinical Modification, ICD-10 and Anatomical, Therapeutic, Chemical classification system (ATC) diagnostic codes used for each category of mental disorder.

In the identification process, the International Classification of Diseases (ICD)-9-Clinical Modification, ICD-10 and Anatomical, Therapeutic, Chemical classification system (ATC) provided the framework codes as shown in **Table SM1**, in the supplementary material (SM). In addition, we searched for individuals who had any prescriptions for antidepressants (ATC N06A group) or antipsychotics (ATC N05A group) to include them in the categories of depression and psychosis respectively. Although it was expected that the intervention would not change the natural history of psychosis and personality disorders, eating disorders, self-harm or ADHD, all of them were included in the study to represent the whole spectrum of mental disorders. We identified individuals with a diagnosis of mental health problems considering all the episodes of primary, emergency, outpatient and in-hospital care to measure the cumulative incidence of the eight diagnostic clusters.

	ICD-9	ICD-10	ATC
Attention deficit hyperactivity disorder	314.xx	F90.xx	
Conduct disorders	312.0x-312.2x, 312.4x-312.9x, 313.xx	F91.xx-F99.xx	
Anxiety	300.xx, 308.xx-309.xx	F40.xx-F49.xx	
Depression	296.xx-299.xx, 300.4, 311	F30.xx-F39.xx	Group ATC N06A
Substance abuse	303.xx-305.xx	F10.xx-F19.xx	
Psychosis and personality disorders	291.xx-292.xx, 295.xx 301.xx-302.xx, 312.3x	F20.xx-F29.xx F60.xx-F69.xx	Group ATC N05A
Eating disorders	307.1x, 307.5x	F50.xx	
Self-harm	V62.84, E95x.xx	R45.851, T14.91, X71.xx-X83.xx	

Table SM2. Relationship between diagnostic clusters and scales used in UPRIGHT.

Measurement (Scale)	ADHD	Conduct disorders	Anxiety	Depression	Substance use	Psychosis	Eating disorders	Self-harm
GAD-7								
PHQ-9								
HBSC Drugs use								
HBSC Fighting and bullying								

GAD-7: General Anxiety Disorder-7; PHQ-9: Patient Health Questionnaire; HBSC: WHO's Health Behavior in School-Aged Children

Table SM3. Cumulative incidence (%) by type of mental disorder from 1 to 30 years of age for male population with low socioeconomic status.

Age	ADHD	Conduct disorders	Anxiety	Depression	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
1	0.01%	0.12%	0.01%	0.03%	0.00%	0.01%	0.06%	0.00%
2	0.03%	0.38%	0.06%	0.20%	0.00%	0.06%	0.14%	0.00%
3	0.12%	0.91%	0.15%	0.37%	0.00%	0.10%	0.17%	0.00%
4	0.26%	1.50%	0.26%	0.51%	0.00%	0.14%	0.24%	0.01%
5	0.49%	2.21%	0.37%	0.61%	0.00%	0.21%	0.28%	0.01%
6	1.06%	3.09%	0.53%	0.73%	0.00%	0.27%	0.34%	0.01%
7	1.92%	4.06%	0.81%	0.82%	0.00%	0.33%	0.38%	0.01%
8	2.83%	5.15%	1.17%	0.91%	0.00%	0.41%	0.41%	0.01%
9	3.78%	6.11%	1.50%	0.99%	0.00%	0.54%	0.45%	0.01%
10	4.59%	7.21%	1.97%	1.09%	0.01%	0.68%	0.47%	0.01%
11	5.27%	8.14%	2.60%	1.21%	0.01%	0.79%	0.48%	0.03%
12	5.80%	8.97%	3.19%	1.32%	0.04%	0.93%	0.52%	0.04%
13	6.55%	9.96%	3.72%	1.42%	0.14%	1.11%	0.55%	0.06%
14	7.19%	10.82%	4.41%	1.56%	0.42%	1.36%	0.60%	0.09%
15	7.51%	11.26%	5.19%	1.80%	1.00%	1.63%	0.65%	0.12%
16	7.67%	11.61%	6.03%	2.12%	1.78%	2.03%	0.71%	0.14%
17	7.84%	12.08%	7.05%	2.48%	2.86%	2.61%	0.84%	0.17%
18	7.96%	12.39%	8.42%	3.03%	4.16%	3.32%	0.86%	0.20%
19	8.11%	12.66%	9.57%	3.74%	5.70%	4.15%	0.87%	0.30%
20	8.16%	13.02%	11.03%	4.37%	7.33%	4.94%	0.89%	0.33%
21	8.27%	13.43%	12.50%	5.18%	9.08%	5.64%	0.91%	0.43%
22	8.39%	13.79%	14.20%	6.03%	11.04%	6.56%	0.96%	0.48%
23	8.45%	14.10%	15.77%	6.99%	12.55%	7.54%	0.99%	0.57%
24	8.50%	14.72%	17.75%	8.31%	14.48%	8.98%	1.07%	0.77%
25	8.60%	15.08%	19.63%	9.51%	16.84%	10.30%	1.07%	0.88%
26	8.85%	15.58%	21.37%	10.63%	19.21%	11.85%	1.07%	1.00%
27	9.08%	16.11%	23.18%	12.13%	21.08%	13.50%	1.07%	1.15%
28	9.08%	16.78%	25.01%	13.00%	22.92%	15.05%	1.07%	1.54%
29	9.08%	17.05%	26.75%	14.34%	24.79%	16.12%	1.07%	1.67%
30	9.08%	17.05%	28.82%	15.64%	26.34%	18.71%	1.33%	2.19%

Table SM4. Cumulative incidence (%) by type of mental disorder from 1 to 30 years of age for male population with medium-high socioeconomic status.

Age	ADHD	Conduct disorders	Anxiety	Depression	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
1	0.01%	0.07%	0.02%	0.02%	0.00%	0.01%	0.03%	0.00%
2	0.03%	0.27%	0.05%	0.09%	0.00%	0.03%	0.09%	0.00%
3	0.07%	0.54%	0.09%	0.18%	0.00%	0.05%	0.14%	0.00%
4	0.15%	0.91%	0.14%	0.24%	0.00%	0.08%	0.17%	0.00%
5	0.30%	1.30%	0.20%	0.29%	0.00%	0.11%	0.20%	0.00%
6	0.64%	1.77%	0.32%	0.34%	0.00%	0.13%	0.22%	0.00%
7	1.21%	2.31%	0.44%	0.38%	0.00%	0.16%	0.24%	0.00%
8	1.80%	2.84%	0.59%	0.42%	0.00%	0.20%	0.26%	0.00%
9	2.45%	3.39%	0.80%	0.47%	0.00%	0.25%	0.29%	0.00%
10	2.95%	3.91%	1.06%	0.51%	0.00%	0.28%	0.31%	0.00%
11	3.39%	4.39%	1.33%	0.55%	0.00%	0.33%	0.33%	0.00%
12	3.79%	4.81%	1.61%	0.60%	0.01%	0.38%	0.35%	0.01%
13	4.27%	5.27%	1.90%	0.64%	0.04%	0.44%	0.37%	0.01%
14	4.72%	5.70%	2.20%	0.71%	0.15%	0.51%	0.39%	0.02%
15	5.01%	5.96%	2.54%	0.78%	0.40%	0.60%	0.43%	0.02%
16	5.22%	6.19%	2.95%	0.86%	0.84%	0.70%	0.46%	0.03%
17	5.38%	6.38%	3.48%	0.97%	1.39%	0.82%	0.49%	0.04%
18	5.49%	6.55%	4.09%	1.09%	2.05%	0.94%	0.51%	0.04%
19	5.56%	6.65%	4.81%	1.23%	2.81%	1.10%	0.53%	0.06%
20	5.61%	6.75%	5.64%	1.40%	3.64%	1.26%	0.55%	0.07%
21	5.64%	6.84%	6.51%	1.59%	4.52%	1.42%	0.57%	0.08%
22	5.68%	6.91%	7.48%	1.81%	5.50%	1.58%	0.58%	0.10%
23	5.71%	6.97%	8.44%	2.02%	6.48%	1.75%	0.60%	0.11%
24	5.76%	7.06%	9.51%	2.24%	7.52%	1.92%	0.61%	0.12%
25	5.79%	7.15%	10.58%	2.56%	8.63%	2.09%	0.63%	0.15%
26	5.81%	7.22%	11.74%	2.84%	9.70%	2.26%	0.64%	0.16%
27	5.85%	7.30%	12.94%	3.16%	10.80%	2.47%	0.64%	0.17%
28	5.86%	7.35%	14.11%	3.50%	11.85%	2.66%	0.65%	0.19%
29	5.88%	7.40%	15.33%	3.87%	12.82%	2.89%	0.65%	0.21%
30	5.88%	7.50%	16.68%	4.36%	13.86%	3.18%	0.66%	0.23%

Table SM5. Cumulative incidence (%) by type of mental disorder from 1 to 30 years of age for female population with low socioeconomic status.

Age	ADHD	Conduct disorders	Anxiety	Depression	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
1	0.01%	0.08%	0.02%	0.04%	0.00%	0.03%	0.04%	0.00%
2	0.02%	0.22%	0.05%	0.08%	0.00%	0.06%	0.08%	0.00%
3	0.03%	0.50%	0.08%	0.11%	0.00%	0.07%	0.14%	0.00%
4	0.08%	0.80%	0.18%	0.12%	0.00%	0.08%	0.20%	0.00%
5	0.12%	1.14%	0.26%	0.14%	0.00%	0.09%	0.23%	0.00%
6	0.28%	1.56%	0.40%	0.18%	0.00%	0.13%	0.26%	0.00%
7	0.65%	2.06%	0.60%	0.20%	0.00%	0.15%	0.28%	0.00%
8	1.01%	2.64%	0.92%	0.21%	0.01%	0.16%	0.34%	0.00%
9	1.46%	3.20%	1.27%	0.25%	0.01%	0.20%	0.37%	0.00%
10	1.72%	3.82%	1.77%	0.26%	0.02%	0.23%	0.43%	0.00%
11	1.87%	4.40%	2.27%	0.30%	0.02%	0.27%	0.49%	0.00%
12	2.05%	4.88%	2.71%	0.32%	0.04%	0.31%	0.59%	0.00%
13	2.29%	5.64%	3.54%	0.40%	0.09%	0.38%	0.71%	0.01%
14	2.54%	6.36%	4.48%	0.62%	0.34%	0.50%	0.92%	0.05%
15	2.69%	6.81%	5.84%	0.81%	0.88%	0.74%	1.14%	0.11%
16	2.80%	7.15%	7.58%	1.22%	1.48%	0.94%	1.43%	0.15%
17	2.91%	7.49%	9.74%	1.53%	2.38%	1.21%	1.66%	0.21%
18	2.97%	7.86%	11.89%	1.95%	3.39%	1.55%	1.89%	0.28%
19	3.06%	8.10%	14.12%	2.50%	4.33%	1.94%	1.99%	0.33%
20	3.09%	8.27%	16.41%	2.88%	5.18%	2.20%	2.10%	0.39%
21	3.11%	8.47%	19.07%	3.39%	6.42%	2.51%	2.20%	0.44%
22	3.15%	8.65%	21.90%	4.16%	7.59%	2.95%	2.40%	0.55%
23	3.17%	8.92%	24.79%	4.75%	8.89%	3.34%	2.47%	0.60%
24	3.21%	9.14%	27.47%	5.37%	10.26%	4.00%	2.63%	0.82%
25	3.24%	9.33%	30.49%	6.37%	12.02%	4.46%	2.70%	0.90%
26	3.24%	9.51%	32.90%	7.26%	13.18%	4.68%	2.79%	0.94%
27	3.24%	9.82%	34.80%	7.95%	14.82%	5.31%	2.85%	1.00%
28	3.24%	9.89%	37.60%	8.95%	15.82%	5.85%	3.05%	1.33%
29	3.24%	10.08%	40.07%	10.56%	17.24%	6.23%	3.14%	1.42%
30	3.24%	10.26%	42.58%	12.17%	17.96%	6.41%	3.14%	1.42%

Table SM6. Cumulative incidence (%) by type of mental disorder from 1 to 30 years of age for female population with medium-to-high socioeconomic status.

Age	ADHD	Conduct disorders	Anxiety	Depression	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
1	0.01%	0.08%	0.01%	0.01%	0.00%	0.01%	0.04%	0.00%
2	0.01%	0.20%	0.04%	0.03%	0.00%	0.02%	0.09%	0.00%
3	0.03%	0.37%	0.07%	0.05%	0.00%	0.03%	0.12%	0.00%
4	0.05%	0.59%	0.11%	0.07%	0.00%	0.03%	0.15%	0.00%
5	0.09%	0.80%	0.16%	0.08%	0.00%	0.04%	0.18%	0.00%
6	0.19%	1.05%	0.24%	0.10%	0.00%	0.05%	0.22%	0.00%
7	0.40%	1.33%	0.36%	0.11%	0.00%	0.07%	0.24%	0.01%
8	0.63%	1.65%	0.51%	0.12%	0.00%	0.08%	0.26%	0.01%
9	0.89%	1.99%	0.72%	0.13%	0.00%	0.10%	0.29%	0.01%
10	1.10%	2.31%	1.01%	0.15%	0.00%	0.12%	0.31%	0.01%
11	1.27%	2.58%	1.28%	0.17%	0.01%	0.13%	0.34%	0.01%
12	1.41%	2.84%	1.59%	0.19%	0.01%	0.16%	0.39%	0.01%
13	1.56%	3.16%	1.94%	0.22%	0.04%	0.19%	0.47%	0.02%
14	1.70%	3.46%	2.42%	0.29%	0.18%	0.24%	0.62%	0.04%
15	1.80%	3.64%	3.10%	0.38%	0.41%	0.30%	0.82%	0.07%
16	1.88%	3.82%	4.00%	0.49%	0.73%	0.39%	1.03%	0.09%
17	1.94%	3.96%	5.14%	0.67%	1.16%	0.49%	1.22%	0.12%
18	2.00%	4.09%	6.41%	0.84%	1.60%	0.60%	1.38%	0.15%
19	2.04%	4.19%	7.78%	1.01%	2.19%	0.68%	1.53%	0.17%
20	2.06%	4.28%	9.29%	1.19%	2.81%	0.76%	1.65%	0.18%
21	2.09%	4.35%	10.84%	1.42%	3.43%	0.85%	1.75%	0.20%
22	2.12%	4.41%	12.48%	1.63%	4.12%	0.92%	1.85%	0.22%
23	2.13%	4.48%	14.10%	1.93%	4.90%	1.02%	1.93%	0.24%
24	2.16%	4.53%	15.79%	2.21%	5.65%	1.10%	2.00%	0.25%
25	2.18%	4.60%	17.54%	2.55%	6.54%	1.19%	2.07%	0.28%
26	2.20%	4.68%	19.28%	2.94%	7.41%	1.30%	2.12%	0.29%
27	2.20%	4.76%	21.04%	3.30%	8.24%	1.40%	2.17%	0.31%
28	2.20%	4.79%	22.96%	3.87%	9.03%	1.54%	2.21%	0.35%
29	2.21%	4.85%	24.88%	4.49%	9.83%	1.69%	2.28%	0.37%
30	2.21%	4.93%	27.13%	5.45%	10.66%	1.90%	2.37%	0.42%

Table SM7. Distribution and parameters for the time until event function for death.

		Death
Type of function		Gompertz
Sex (x1)	Women	0.000
	Men	0.638
Mental health problem (x2)	No	0.000
	Yes	0.431
Constant (x0)		-30.261
Beta		0.001

As can be seen in **Table SM7**, a Gompertz distribution was selected to model time to death and this was expressed with the formula below:

$$Time\ to\ event\ (Gompertz) = \frac{1}{\beta} * \ln(1 - \frac{\beta}{\alpha} * \ln(1 - u) * e^{-\beta})$$

where:

$$\ln(\alpha) = x_0 + x_1 * sex + x_2 * presence\ of\ mental\ health\ problem.$$

The equations included a uniformly distributed random factor between 0 and 1 (u) and two parameters α and β that defined the characteristics of the distribution.

Table SM8. Utilities for individuals with and without mental health problems extracted from the 2012 Spanish National Health Survey (EQ-5D-5L).

	Mental health problems	
	No	Yes
Male with low SES	0.9851	0.9082
Male with medium-to-high SES	0.9875	0.8942
Female with low SES	0.9856	0.8807
Female with medium-to-high SES	0.9880	0.8448

Table SM9. Unit costs of the healthcare resources obtained from the Basque Health Service for 2021.

Resource	Euros (€)
PC nurse (centre)	12.31
PC nurse (telephone)	6.16
PC nurse (home)	22.37
General practitioner (centre)	27.91
General practitioner (telephone)	13.95
General practitioner (home)	39.09
Outpatient services (first)	136.55
Outpatient services (second)	80.31
Emergency services	172.68
Hospitalisation (per day)	486.02
Home hospitalisation (per day)	349.15

PC: primary care

Table SM10. Direct healthcare cost, direct non-medical cost and indirect cost per person (in €) disaggregated by diagnostic group.

	Healthy population	Substance abuse	Anxiety	Mood disorders	Psychosis	ADHD	Conduct disorders	Eating disorders	Self-harm	2 or more diagnoses
Primary care										
<i>1-12 years</i>	19.962	45.730	16.135	16.520	15.420	15.494	16.542	17.958	12.075	16.368
<i>13-18 years</i>	43.881	91.536	90.771	69.181	68.629	56.736	64.215	69.654	101.095	106.122
<i>19-24 years</i>	57.394	87.708	118.008	99.408	88.174	69.344	78.358	88.239	91.986	132.134
<i>25-30 years</i>	58.664	87.319	122.432	116.015	83.109	66.230	81.479	83.486	96.833	146.441
Hospital care cost										
<i>1-12 years</i>	249.532	188.736	382.793	609.057	850.128	411.899	407.668	448.813	400.664	834.797
<i>13-18 years</i>	169.918	340.340	369.488	495.961	477.167	303.361	313.406	606.681	603.420	1,340.595
<i>19-24 years</i>	161.619	340.697	330.237	434.156	568.007	191.287	221.019	350.702	881.225	1,046.204
<i>25-30 years</i>	195.941	354.709	378.249	554.961	366.830	167.253	249.729	506.568	531.169	1,144.294
Drug prescription cost										
<i>1-12 years</i>	33.204	550.634	105.303	119.232	107.750	112.576	106.262	103.288	79.347	106.673
<i>13-18 years</i>	29.323	133.303	133.925	148.710	115.868	114.098	122.174	120.835	73.693	141.839
<i>19-24 years</i>	35.846	108.959	114.428	124.946	143.132	113.196	113.513	118.332	89.123	113.774
<i>25-30 years</i>	37.466	132.972	109.382	76.933	115.491	118.041	105.612	131.027	40.397	103.459
Direct non-medical cost	0.000	982.311	27.192	531.377	660.539	3,422.793	3,422.793	50.985	660.539	-
Indirect cost	0.000	1,489.895	1,074.084	1,813.933	13,261.765	0.000	0.000	101.970	1,813.933	-

Table SM11. Cost per student receiving the two years of the UPRIGHT intervention.

Cost component	Cost (€)
Training cost	80.81
Implementation cost	44.92
Material cost	10.00
Total cost	135.73

Table SM12. Multivariate statistical analysis estimating the likelihood of worsening because of the pandemic or changing from a low- to a high-risk group expressed as an odd ratio (OR) and confidence intervals.

	GAD-7^a	PHQ-9^a	HBSC - Drug use^a	HBSC - Fighting and bullying^a
Control group	Reference	Reference	Reference	Reference
Intervention group	0.71 (0.50-1.00)*	0.66 (0.47-0.91)*	0.90 (0.60-1.34)	1.11 (0.89-1.38)

* p-value ≤ 0,05, ** p-value ≤ 0,01.

^a Calculated using logistic binary regression.

Table SM13. Model validation through comparison of the observed and simulated cumulative incidences. Goodness-of-fit test for each diagnostic group stratified by sex and SES. To validate the model, the correlation coefficient and the FAC2 were required to be higher than 0.8, the normalised mean squared error lower than 0.5, and the fractional bias and fractional variance between -0.5 and 0.5.

Low SES male	ADHD	Conduct disorders	Anxiety	Mood disorders	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
R: > 0.8	0.966	0.967	0.967	0.967	0.967	0.967	0.965	0.966
NMSE: < 0.5	0.000	0.000	0.000	0.002	0.000	0.001	0.005	0.016
FB: [-0.5, 0.5]	0.016	-0.009	-0.003	-0.038	-0.007	-0.016	-0.055	-0.076
FV: [-0.5, 0.5]	0.021	0.022	0.012	0.022	0.016	0.018	0.094	0.073
FAC2: > 0.8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Medium-to-High SES male	ADHD	Conduct disorders	Anxiety	Mood disorders	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
R: > 0.8	0.967	0.967	0.967	0.967	0.967	0.967	0.967	0.966
NMSE: < 0.5	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.012
FB: [-0.5, 0.5]	0.005	0.002	0.011	0.008	-0.009	-0.015	0.034	-0.070
FV: [-0.5, 0.5]	0.008	0.004	0.011	0.016	0.007	0.021	0.017	0.072
FAC2: > 0.8	1.000	1.000	1.000	1.000	0.917	1.000	1.000	1.000
Low SES female	ADHD	Conduct disorders	Anxiety	Mood disorders	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
R: > 0.8	0.967	0.967	0.967	0.967	0.967	0.966	0.966	0.966
NMSE: < 0.5	0.000	0.000	0.000	0.003	0.001	0.001	0.002	0.009
FB: [-0.5, 0.5]	0.001	0.019	-0.005	-0.041	-0.014	0.014	0.037	0.067
FV: [-0.5, 0.5]	0.019	0.014	0.005	0.031	0.017	0.024	0.043	0.054
FAC2: > 0.8	0.833	1.000	1.000	0.917	1.000	1.000	1.000	1.000
Medium-to-High SES female	ADHD	Conduct disorders	Anxiety	Mood disorders	Substance use	Psychosis and personality disorders	Eating disorders	Self-harm
R: > 0.8	0.967	0.967	0.967	0.967	0.967	0.967	0.967	0.967
NMSE: < 0.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
FB: [-0.5, 0.5]	-0.018	0.009	0.004	0.010	0.001	-0.001	0.009	-0.019
FV: [-0.5, 0.5]	0.016	0.006	0.003	0.007	0.004	0.019	0.007	0.017
FAC2: > 0.8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

R: correlation coefficient; NMSE: normalised mean square error; FB: fractional bias; FV: fractional variance; FAC2: fraction of predictions within a factor of two

Table SM14. Cost savings expressed in millions of euros achieved by the UPRIGHT intervention in the total population (30 cohorts) from 14 to 30 years old for different cost components with a discount (3%) and according to the intervention duration.

	Base case	UPRIGHT (2 years)		UPRIGHT (5 years)		Systematic Review ²⁸	
	Costs	Costs	Difference	Costs	Difference	Costs	Difference
Direct healthcare costs	2,473.28	2,423.27	-50.01	2,414.86	-58.41	2,433.36	-39.91
Primary care	436.00	431.24	-4.75	429.45	-6.55	432.67	-3.33
Hospital care	1,665.21	1,626.84	-38.37	1,621.89	-43.33	1,633.75	-31.47
Drug prescription	372.07	365.18	-6.88	363.53	-8.54	366.95	-5.12
Direct non-medical costs	2,646.66	2,634.26	-12.39	2,632.55	-14.11	2,637.49	-9.17
Indirect costs	2,653.90	2,564.45	-89.45	2,522.78	-131.12	2,599.58	-54.33
Intervention costs	0.00	82.69	82.69	82.69	82.69	82.69	82.69
Total costs	7,773.84	7,704.68	-69.16	7,652.88	-120.95	7,753.12	-20.72

Table SM15. Total costs for different cost categories without a discount expressed in millions of euros (M€).

	Base case	UPRIGHT (2 years)		UPRIGHT (5 years)		Systematic Review ³⁸	
	Cost (M€)	Cost (M€)	Difference (M€)	Cost (M€)	Difference (M€)	Cost (M€)	Difference (M€)
Direct healthcare costs	3,901.02	3,819.80	-81.22	3,805.70	-95.32	3,835.57	-65.45
<i>Primary care costs</i>	687.92	680.25	-7.68	677.23	-10.70	682.52	-5.41
<i>Hospital care costs</i>	2,628.33	2,565.14	-63.19	2,556.63	-71.70	2,576.11	-52.22
<i>Drug prescription costs</i>	584.77	574.42	-10.35	571.84	-12.93	576.94	-7.83
Direct non-medical costs	4,166.92	4,146.70	-20.22	4,143.90	-23.03	4,151.66	-15.26
Indirect costs	4,610.40	4,471.81	-138.58	4,404.26	-206.14	4,525.38	-85.01
Intervention costs	0.00	82.69	82.69	82.69	82.69	82.69	82.69
Total costs	12,678.34	12,521.01	-157.33	12,436.54	-241.80	12,595.30	-83.04

Table SM16. Cost-utility analysis for healthcare in costs (euros) without discount and disaggregated by sex and socioeconomic status.

	Base case		UPRIGHT (2 years)		Δ Cost	Δ QALY	ICUR
	Cost (€)	QALY	Cost (€)	QALY			
Total	6,401.54	16.24	6,403.96	16.27	2.42	0.03	92.58
Low SES male	8,736.65	16.12	8,640.11	16.14	-96.54	0.02	Dominant
High SES male	6,230.93	16.36	6,276.57	16.37	45.64	0.01	3,283.30
Low SES female	7,984.05	16.00	7,831.22	16.04	-152.83	0.04	Dominant
High SES female	6,240.81	16.17	6,223.20	16.21	-17.60	0.04	Dominant
	Base case		UPRIGHT (5 years)		Δ Cost	Δ QALY	ICUR
	Cost (€)	QALY	Cost (€)	QALY			
Total	6,401.54	16.24	6,380.82	16.28	-20.73	0.03	Dominant
Low SES male	8,736.65	16.12	8,581.50	16.14	-155.14	0.02	Dominant
High SES male	6,230.93	16.36	6,251.89	16.37	20.96	0.02	1,154.14
Low SES female	7,984.05	16.00	7,772.62	16.06	-211.43	0.05	Dominant
High SES female	6,240.81	16.17	6,207.33	16.21	-33.48	0.05	Dominant
	Base case		Systematic Review ³⁸		Δ Cost	Δ QALY	ICUR
	Cost (€)	QALY	Cost (€)	QALY			
Total	6,401.54	16.24	6,429.84	16.27	28.29	0.02	1,380.84
Low SES male	8,736.65	16.12	8,716.10	16.13	-20.55	0.01	Dominant
High SES male	6,230.93	16.36	6,307.59	16.37	76.66	0.01	8,617.94
Low SES female	7,984.05	16.00	7,881.32	16.03	-102.74	0.03	Dominant
High SES female	6,240.81	16.17	6,238.09	16.20	-2.71	0.03	Dominant

QALY: quality adjusted life year; ICUR: incremental cost-utility ratio.

Table SM17. Cost-utility analysis for total costs (societal perspective) with discount and disaggregated by sex and socioeconomic status.

	Base case		UPRIGHT (2 years)		Δ Cost	Δ QALY	ICUR
	Cost	QALY	Cost	QALY			
Total	12,757	10.81	12,643	10.82	-113.49	0.02	Dominant
Low SES male	28,256	10.72	27,933	10.73	-323.07	0.01	Dominant
High SES male	13,337	10.87	13,269	10.88	-67.51	0.01	Dominant
Low SES female	18,402	10.66	18,049	10.69	-353.39	0.02	Dominant
High SES female	10,467	10.77	10,347	10.79	-120.08	0.02	Dominant
	Base case		UPRIGHT (5 years)		Δ Cost	Δ QALY	ICUR
	Cost	QALY	Cost	QALY			
Total	12,757	10.81	12,558	10.83	-198.49	0.02	Dominant
Low SES male	28,256	10.72	27,798	10.74	-458.11	0.02	Dominant
High SES	13,337	10.87	13,205	10.88	-131.58	0.01	Dominant
Low SES female	18,402	10.66	17,857	10.69	-545.64	0.03	Dominant
High SES female	10,467	10.77	10,255	10.79	-211.97	0.03	Dominant
	Base case		Systematic Review ³⁸		Δ Cost	Δ QALY	ICUR
	Cost	QALY	Cost	QALY			
Total	12,757	10.81	12,722.80	10.82	-34.00	0.01	Dominant
Low SES male	28,256	10.72	28,102.83	10.73	-152.90	0.01	Dominant
High SES male	13,337	10.87	13,351.58	10.88	14.95	0.01	2,606.54
Low SES female	18,402	10.66	18,183.36	10.68	-218.92	0.02	Dominant
High SES female	10,467	10.77	10,412.02	10.79	-55.36	0.02	Dominant

QALY: quality-adjusted life year; ICUR: incremental cost-utility ratio.

Table SM18. Cost-utility analysis for total costs (societal perspective) without discount and disaggregated by sex and socioeconomic status.

	Base case		UPRIGHT (2 years)		Δ Cost	Δ QALY	ICUR
	Cost (€)	QALY	Cost	QALY			
Total	20,805	16.24	20,546	16.27	-258.18	0.03	Dominant
Low SES male	47,320	16.12	46,730	16.14	-589.86	0.02	Dominant
High SES male	21,529	16.36	21,348	16.37	-180.84	0.01	Dominant
Low SES female	30,620	16.00	29,972	16.04	-648.29	0.04	Dominant
High SES female	17,128	16.17	16,856	16.21	-272.07	0.04	Dominant
	Base case		UPRIGHT (5 years)		Δ Cost	Δ QALY	ICUR
	Cost	QALY	Cost	QALY			
Total	20,805	16.24	20,408	16.28	-396.79	0.03	Dominant
Low SES male	47,320	16.12	46,513	16.14	-806.88	0.02	Dominant
High SES male	21,529	16.36	21,244	16.37	-285.17	0.02	Dominant
Low SES female	30,620	16.00	29,660	16.06	-959.94	0.05	Dominant
High SES female	17,128	16.17	16,705	16.21	-422.49	0.05	Dominant
	Base case		Systematic Review ³⁸		Δ Cost	Δ QALY	ICUR
	Cost	QALY	Cost	QALY			
Total	20,805	16.24	20,668.78	16.27	-136.26	0.02	Dominant
Low SES male	47,320	16.12	46,989.03	16.13	-331.52	0.01	Dominant
High SES male	21,529	16.36	21,475.89	16.37	-53.50	0.01	Dominant
Low SES female	30,620	16.00	30,176.11	16.03	-444.33	0.03	Dominant
High SES female	17,128	16.17	16,955.21	16.20	-173.24	0.03	Dominant

Figure SM1. The resilience framework

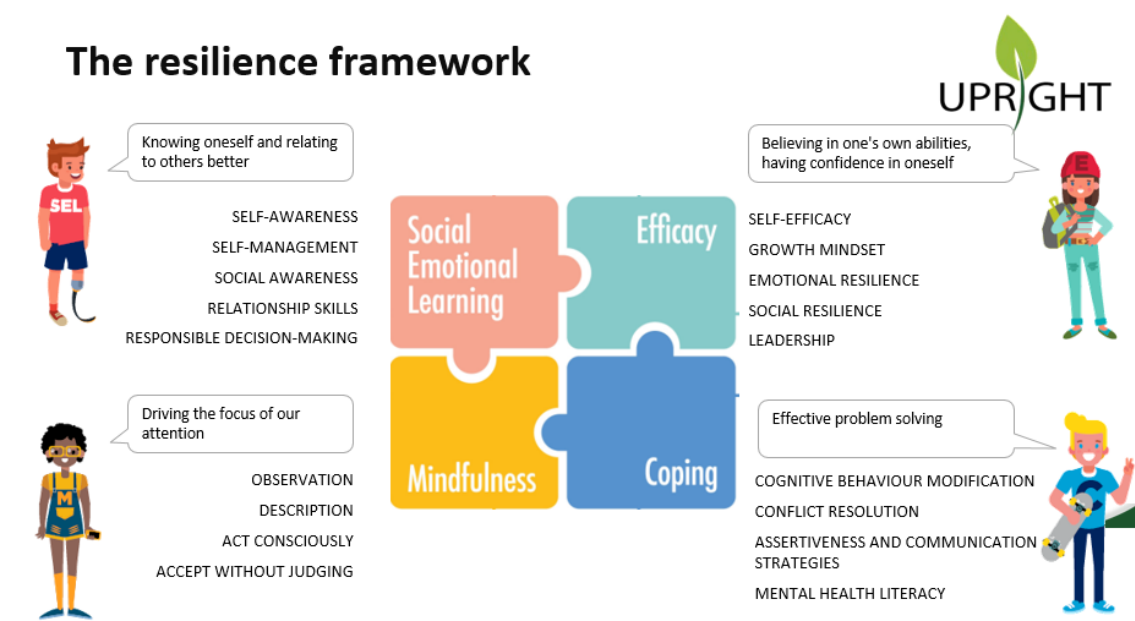


Figure SM2. Flow diagram of the discrete event simulation model.

