Supplemental Digital Content 3. Input parameters and type of analyses

		Base	Scenario		Limit		Distribution	
	Age	Case	1	2	Upper	Lower		SD
Cohort (n)		864,000	✔	✔			Constant	
Incidence (Ambulatory visits + Hosp.)	0	95.212	✔	✔	96.736	93.688	Normal	0.778
(per 1,000 person-year)	1	275.671			278.075	273.268		1.226
	2	132.128			133.888	130.368		0.898
	3	107.803			109.575	106.030		0.904
	4	45.868			47.062	44.673		0.609
RVGE Hosp. rate (to the cohort)	0	10.633	✔[1]	✔[2]	12.233	9.034	Normal	0.816
(per 1,000 person-year)	1	15.757			17.680	13.834		0.981
	2	7.314			8.630	5.998		0.671
	3	2.780			3.643	1.917		0.440
	4	1.861			2.563	1.159		0.358
Convulsion rate (to RVGE Hosp.) (%)		12.4260		✔	14.0839	10.7682	Normal	00.8458
Encephalopathy Hosp. (n)	0	1.234712		✔	1.432322	1.037101	Normal	0.100822
	1	9.877693			11.45858	8.296808		0.806574
	2	7.40827			8.593934	6.222606		0.604931
	3	2.469423			2.864645	2.074202		0.201644
	4	3.704135			4.296967	3.111303		0.302465
Encephalopathy Death rate		9.1505		✔	13.5526	4.7484	Normal	2.2460
(to Encephalopathy Hosp.) (%)								
Encephalopathy Sequelae rate		29.4320		✔	36.3902	22.4739	Normal	3.5501
(to Encephalopathy Hosp.) (%)								
Nosocomial Infection rate	0-1	13.6153		✔			Constant	

(to RVGE Hosp.) (%)	2-3	7.0537						
	4	6.2663						
Death (without Encephalopathy) (n)		10		✔	20	0	Trunc. normal	5
(divided to RVGE Hosp. distribution)								
Excess Intussusception incidence	0	0.8		✔	3.06	0	Trunc. normal	1.15
(to the cohort) (per 1,000 person-year)	1-	0					Constant	
Utility for Ambulatory visits	0	0.781	✔	✔	0.884	0.678	Trunc. normal	0.263
	1	0.735			0.854	0.616		0.304
	2-	0.688			0.824	0.553		0.345
Utility for Hosp.	0	0.425	✔	✔	0.520	0.330	Trunc. normal	0.243
(common to RVGE, Convulsion, and	1	0.313			0.436	0.243		0.315
Encephalopathy)	2-	0.200			0.352	0.049		0.386
Utility for Encephalopathy Sequelae		0.333		✔			Constant	
(including from next year)								
Utility for Intussusception		0.730		✔	0.970	0.500	Trunc. normal	0.320
Days for RVGE (days)		6	✔	✔	7	5	Uniform	
of which, Hosp. (including Convulsion)		5	✔	✔			Constant	
additional Hosp. days for Nosocomial Infection		3		✔			Constant	
Days of Hosp. for Encephalopathy (days)		10		✔	14	7	Uniform	
Days of Hosp. for Intussusception (days)		3		✔			Constant	
Vaccine Coverage (%)		94	✔	✔	98	90	Trunc. normal	2

Posteroanterior ratio[3] for Ambulatory visits (%)	27.7	✔				
	1.3		✔	Calculated[4]		Uniform
Posteroanterior ratio[3] for Hosp. and Death (%)	9.9	✔				
	15.3		✔	Calculated[4]		Uniform
Cost for Ambulatory visit (JPY/course)	17,000	✔	✔	22,000	12,000	Triangular
Cost for RVGE Hosp. (JPY/course)	222,000	✔	✔	250,000	116,000	Triangular
Cost for Convulsion Hosp. (JPY/course)	269,000		✔	303,000	140,000	Triangular
Cost for Encephalopathy Hosp. (JPY/course)	320,000		✔			Constant
Cost for Encephalopathy Sequela (JPY/year) (including from next year)	368,000		✔			Constant
Cost for Nosocomial Infection (JPY/course)	73,000		✔			Constant
Cost for Intussusception (JPY/course)	100,000		✔	200,000	50,000	Triangular
Indirect Cost (JPY/hour) (2 hours/day for Hosp. and 8 hours/day for others)	1,492	✔	✔			Constant
Vaccination Cost (JPY/course)	30,000	✔	✔	33,000	27,000	Constant
Discount rate (%)	2	✔	✔	4	0	Constant
Type of Analyses	Base		Base/One-way/ PSA			

See Supplemental Digital Content 1 for details of each item.

[1] These values include Nosocomial infections. As Scenario 1 does not take into account Nosocomial infections, the corresponding values were reduced.

[2] These values are the sum of community-acquired RVGE, Convulsion, and Nosocomial infection.

[3] Equal to “100%-Vaccine Effectiveness”. This is the ratio of the change from after introduction of the vaccines to before the introduction of the vaccines (N of after / N of before) among patients with RV infection.

[4] Calculated from values between with/without herd immunity effect on the coverage.

Hosp., Hospitalization; RVGE, rotavirus gastroenteritis; JPY, Japanese Yen; Trunc., truncated.