AirCoV2 - screenshots

Voorbeeld: woonkamer met vier personen, verblijfsduur 1 uur.

Er is één besmettelijk persoon aanwezig die virus via aerosolen verspreid via ademen/spreken/1 hoest/ 1nies. Kans op besmetting van tenminste één persoon wordt geschat.

Zonder ventilatie:

AirCoV2

SCENARIO

Living room

Length, m	7
Width, m	4.5
Height, m	2.2
Volume, m³	69.

Ventilation

- ⦿ liter/sec/person 0
- ○ m³/h 0.

One infected person

Virus/ml in mucus 10^ 8

P[10^8 virus/ml] 8.5%

Exposed person(s)

Number	4
Exposure time, min.	60

Virus infectivity

Intact fraction	0.01
Infectious fraction	0.5

Virus concentration in the air

⦿ Virus/room ○ Virus/L

National Institute for Public Health and the Environment
Ministry of Health, Welfare and Sport

Risk calculator for aerosol transmission of SARS–CoV2

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Exposure and infection risk Dose Virus concentration in the air

	Exposure probability				Infection risk			
	Mean	5%	50%	95%	Mean	5%	50%	95%
Breathe–Lo	0.13%	0%	0%	1%	0.064%	0%	0%	0.5%
Breathe–Hi	0.98%	0%	0%	3.9%	0.53%	0%	0%	2%
Speak–Lo	0.77%	0%	0%	3%	0.38%	0%	0%	1.5%
Speak–Hi	1.1%	0%	1%	3.9%	0.54%	0%	0.5%	2%
Cough–Lo	0.21%	0%	0%	1%	0.11%	0%	0%	0.5%
Cough–Hi	8.5%	1%	6.8%	23%	4.4%	0.5%	3.4%	12%
Sneeze–Lo	9.3%	2%	8.6%	20%	4.8%	1%	4.4%	10%
Sneeze–Hi	49%	24%	48%	78%	30%	13%	28%	53%

Probability of exposing and infecting at least one person via aerosol transmission of virus from one infected person.

Exposure probability and infecting risk are equal if the fractions of intact virus particles and of virus particles giving infection are both equal to one.

The probability of this scenario occurring depends on the prevalence of the virus infection and the frequency of persons meeting in this kind of room for this period of time.
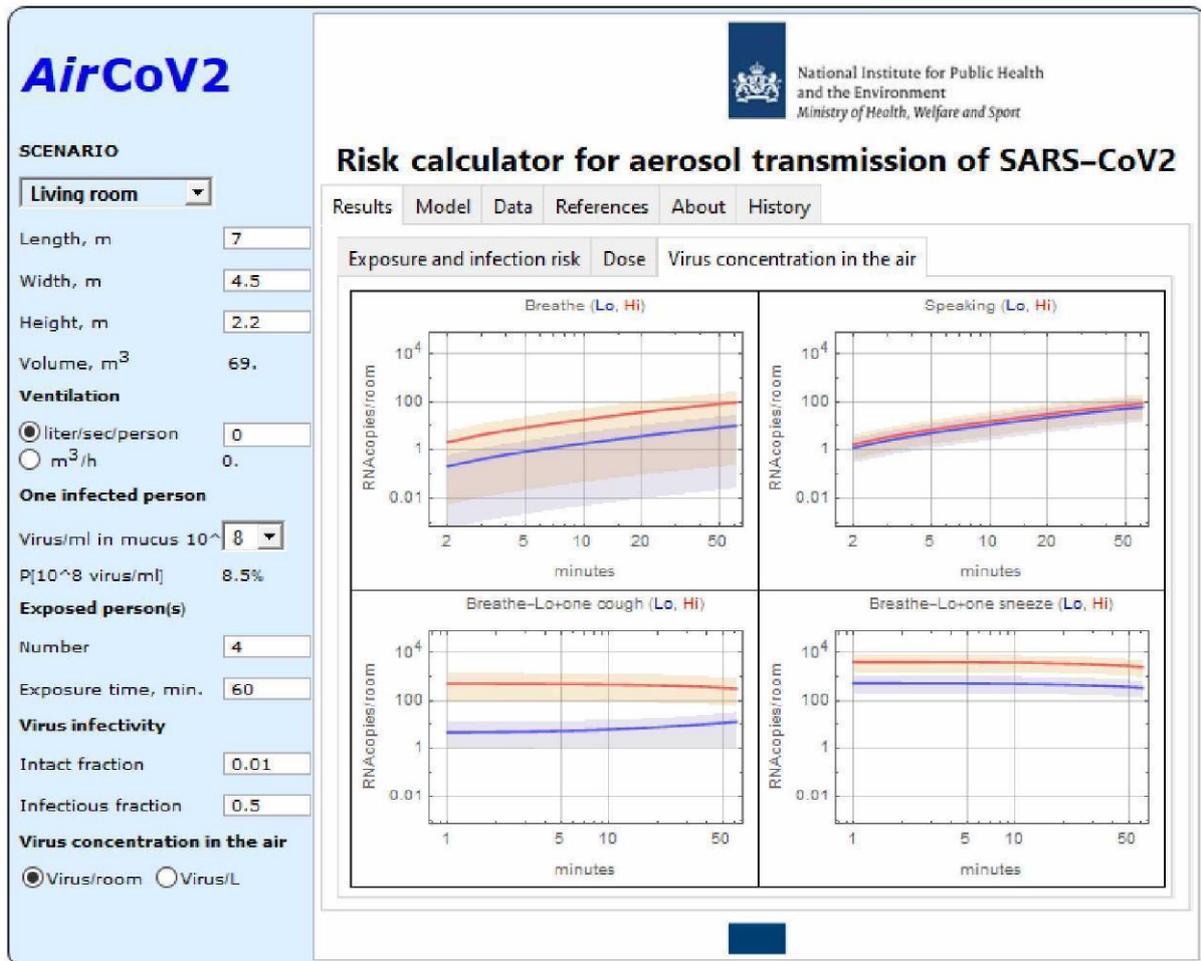
Door ademen en spreken nemen de aantal virussen in de ruimte voortdurend toe. Door een nies of hoest zijn de aantallen uitgestoten virussen aan het begin van de verblijfsduur meteen veel hoger. Dit blijft in een uur vrijwel constant.

Met ventilatie (hier 4 x 12 l/s/p=172.8 m3/uur):

*Air*CoV2

SCENARIO

Living room ▾

Length, m	7
Width, m	4.5
Height, m	2.2
Volume, m^3	69.

Ventilation

◉ liter/sec/person 12
○ m^3/h 172.8

One infected person

Virus/ml in mucus 10^ 8 ▾

P[10^8 virus/ml] 8.5%

Exposed person(s)

Number	4
Exposure time, min.	60

Virus infectivity

Intact fraction	0.01
Infectious fraction	0.5

Virus concentration in the air

◉ Virus/room ○ Virus/L

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Exposure and infection risk | Dose | Virus concentration in the air

	Exposure probability				Infection risk			
	Mean	5%	50%	95%	Mean	5%	50%	95%
Breathe–Lo	0.07%	0%	0%	0%	0.035%	0%	0%	0%
Breathe–Hi	0.57%	0%	0%	2%	0.3%	0%	0%	1%
Speak–Lo	0.41%	0%	0%	2%	0.2%	0%	0%	1%
Speak–Hi	0.57%	0%	0%	2%	0.29%	0%	0%	1%
Cough–Lo	0.1%	0%	0%	1%	0.051%	0%	0%	0.5%
Cough–Hi	3.6%	0%	3%	10%	1.9%	0%	1.5%	5.4%
Sneeze–Lo	3.9%	0%	3%	9.5%	2%	0%	1.5%	4.9%
Sneeze–Hi	25%	9.5%	23%	46%	14%	4.9%	12%	27%

Probability of exposing and infecting at least one person via aerosol
transmission of virus from one infected person.

Exposure probability and infecting risk are equal if the fractions of
intact virus particles and of virus particles giving infection are both
equal to one.

The probability of this scenario occurring depends on the prevalence
of the virus infection and the frequency of persons meeting in this
kind of room for this period of time.
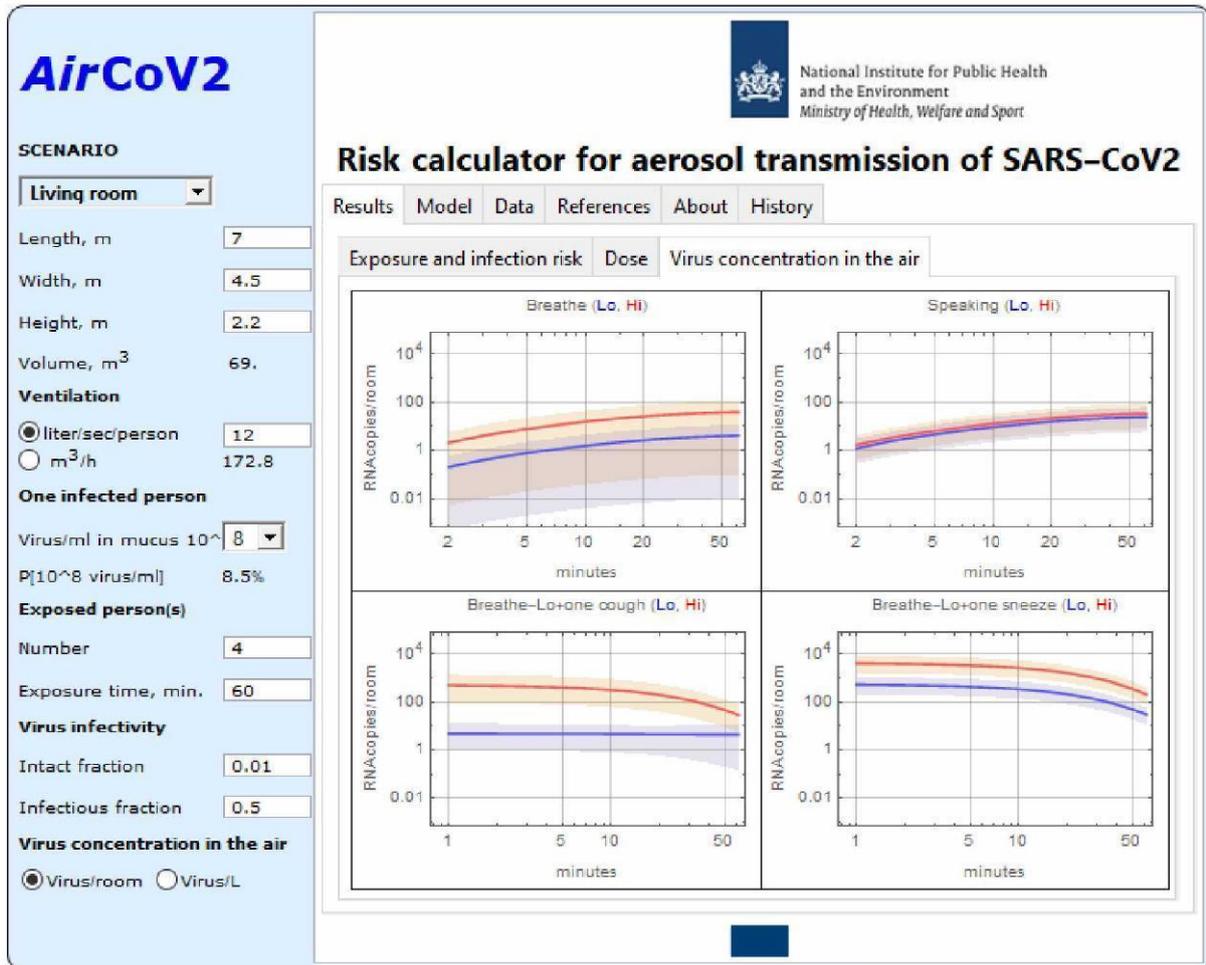
Kans op blootstelling/infectie ruwweg factor twee lager.

De grafieken tonen een afname van de virusconcentratie in de lucht vanaf ongeveer 10 minuten in de hoest- en niesscenario's.