

Omikron ja tartunnat, rajoitukset ja rokottaminen

KRAR 15.12.2021

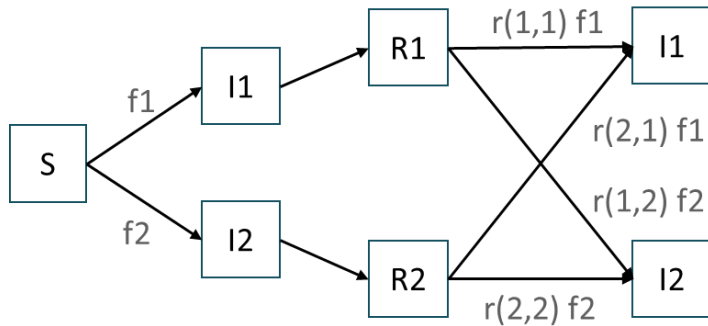
THL koronamallinnusryhmä/Simopekka Vänskä & Tuija Leino

Omikron

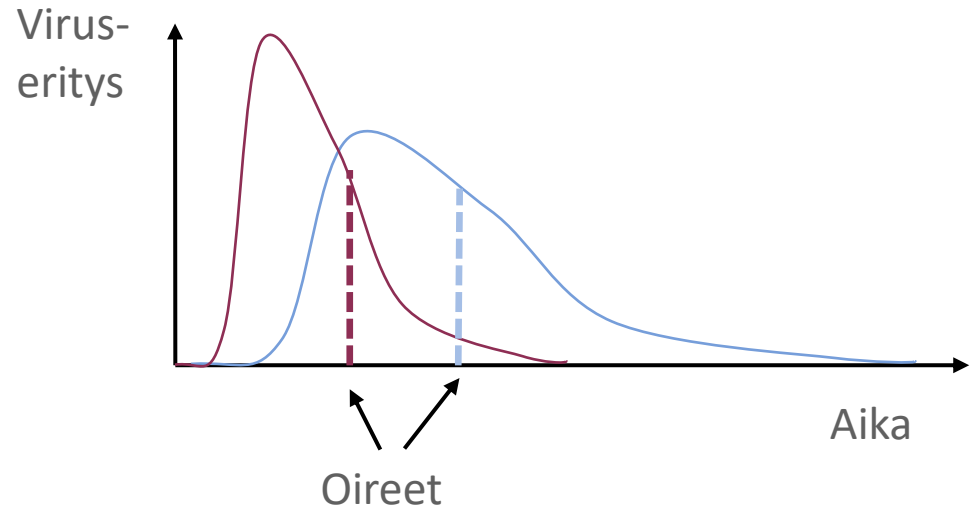
- Kohonnut transmissio?
 - Korkeampi R?
- Rokotesuoja heikompi?
 - Alhaisempi VE?
- Muuta?
 - Ristisuoja?
 - VE rakenne?
 - Tartunnan vaiheiden kesto?
 - Vaikuttaa kasvuvauhtiin vaikka R pysyisi samana
- Epävarmuuksia miten paljon Omikron –variantti eroaa aiemmista
- Tarkastellaan seuraavaksi miten epidemia saattaisi muuttua, kun:
 - Varioidaan R ja VE tartunnalle
- Miten kontrolloida muuttunutta epidemiaa

Ristisuoja ja tartunnan vaiheet

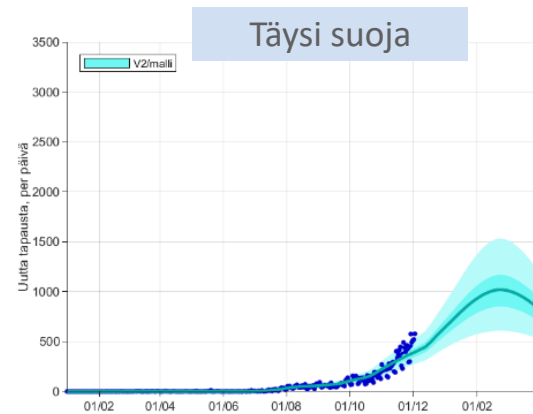
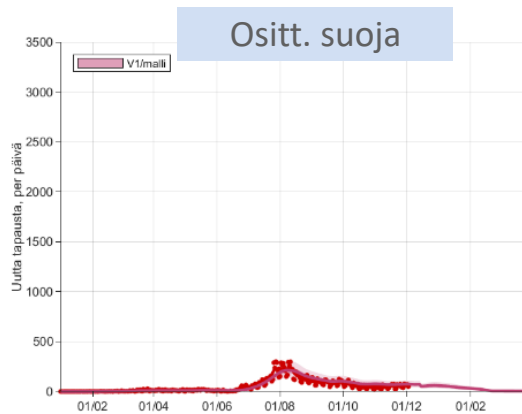
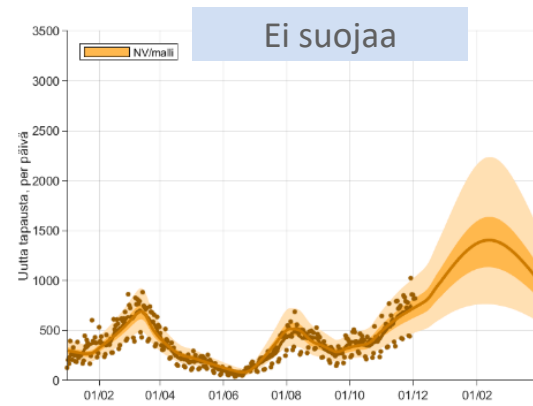
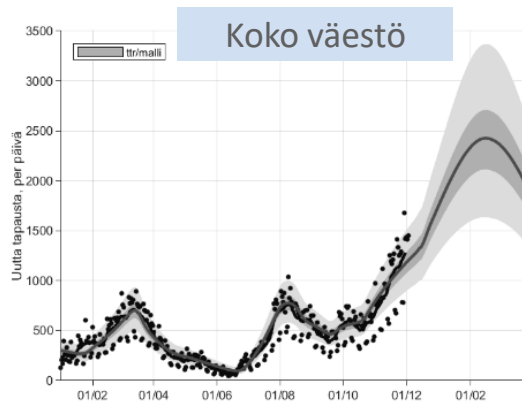
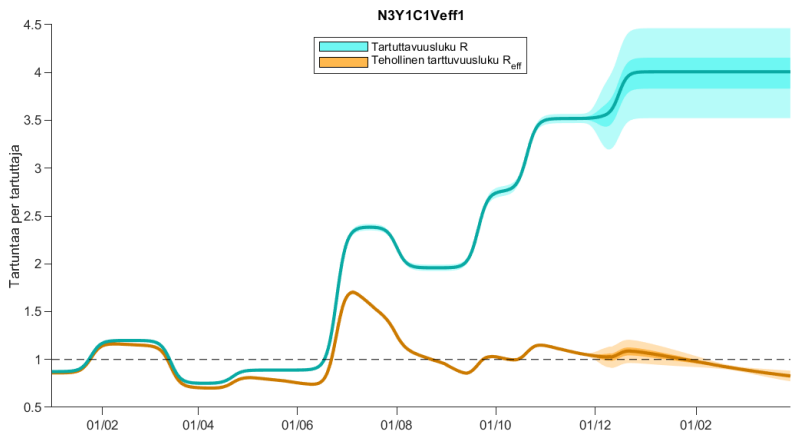
Ristisuoja



Tartunnan vaiheita



Nousu $R \rightarrow 4$, VE ennallaan



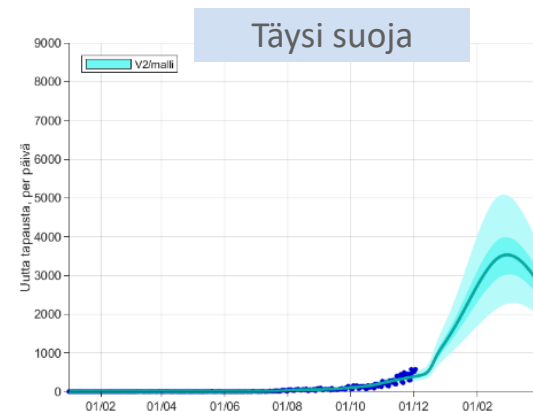
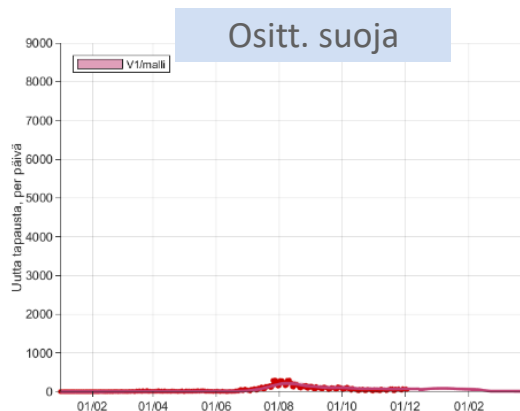
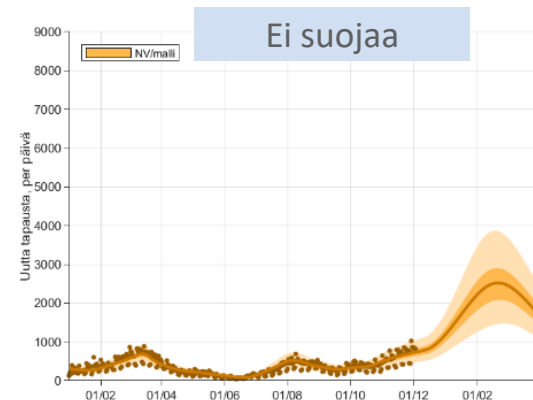
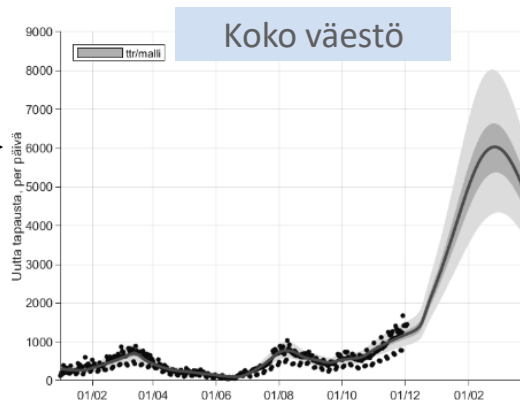
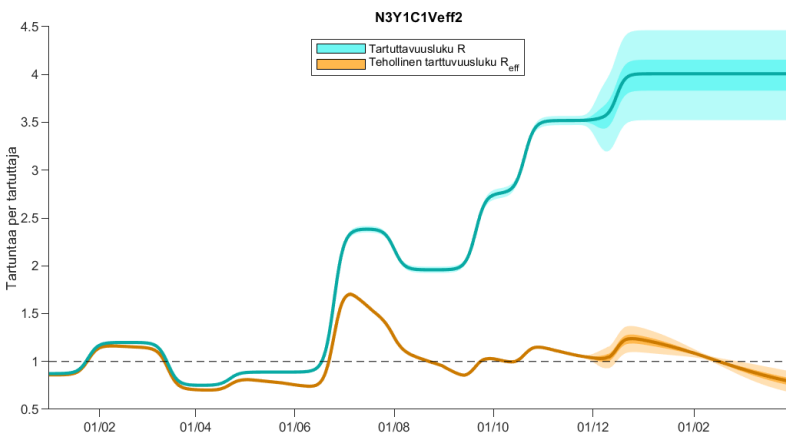
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Nousu $R \rightarrow 4$, VE tartunnalle -20%

Tartunnat nousevat vahvasti

- Rokottamattomilla ja rokotetuilla (VE alentui!)



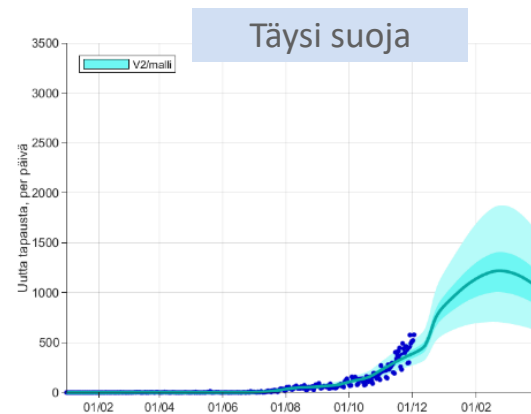
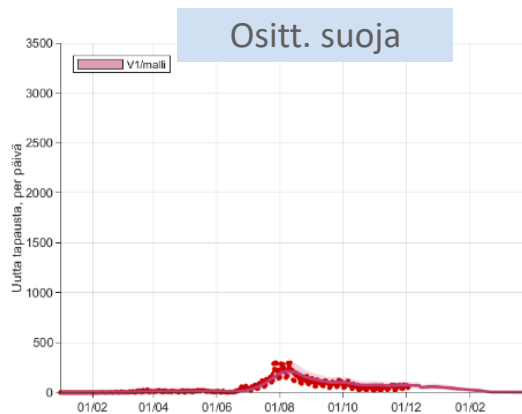
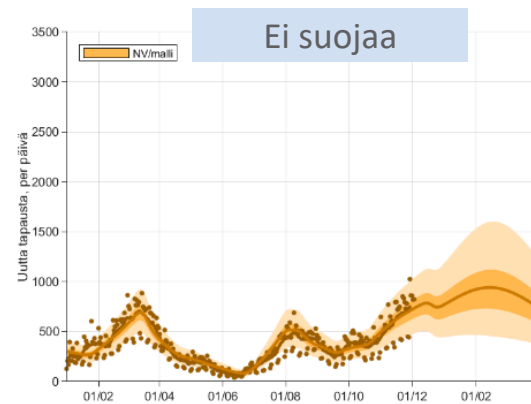
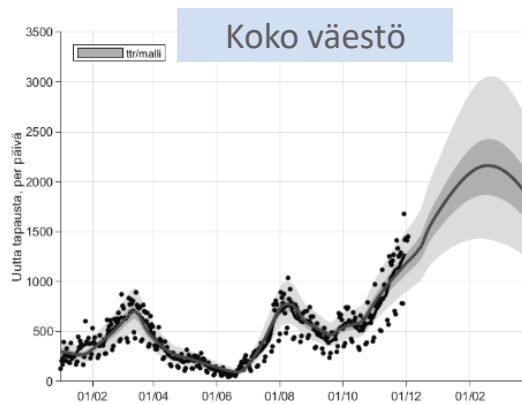
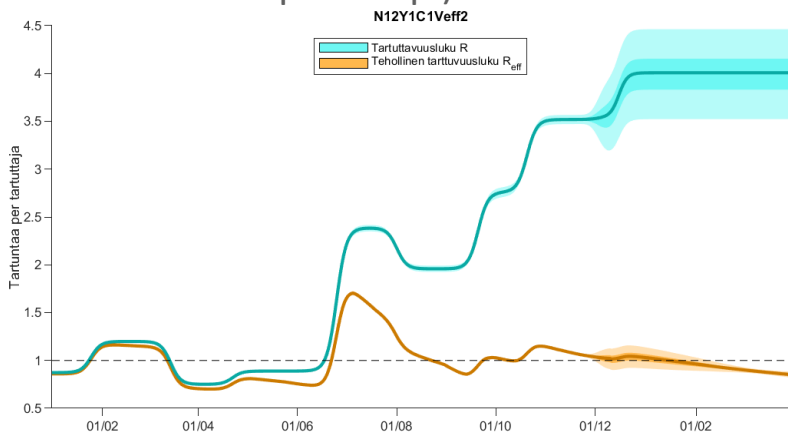
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Nousu $R \rightarrow 4$, VE tartunnalle -20%

Rajoitetaan rokottamattomia aikuisia:
kontaktit -50%

- Erit. rokottamattomien tapaukset alentuvat
- Myös rokotetuilla (lisäksi ESH per tartunta pienempi)

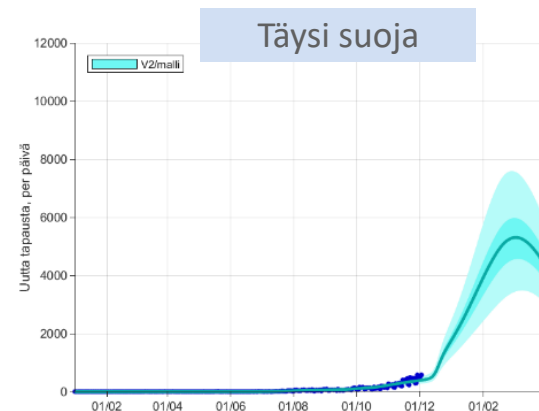
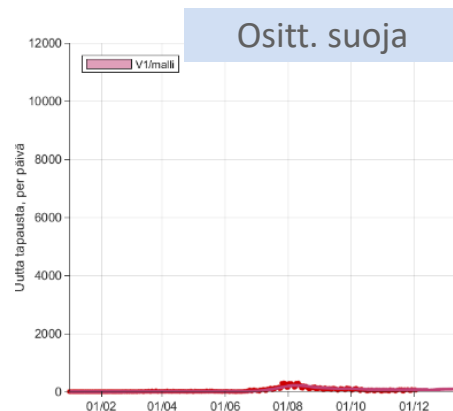
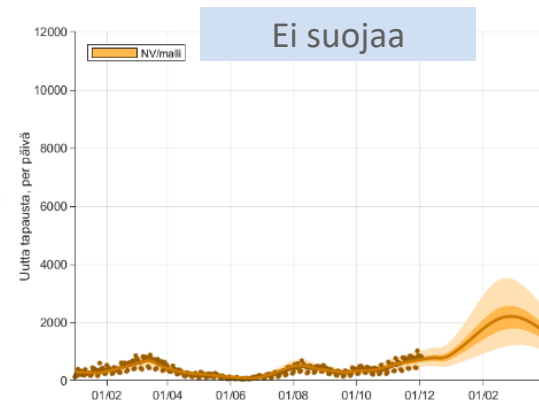
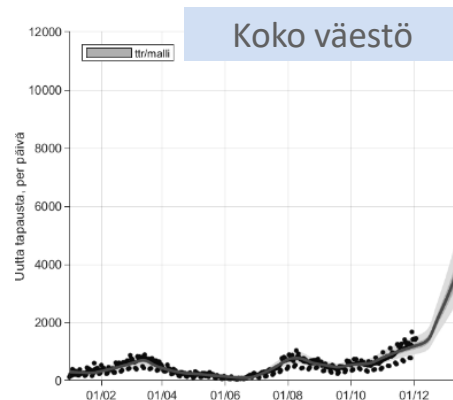
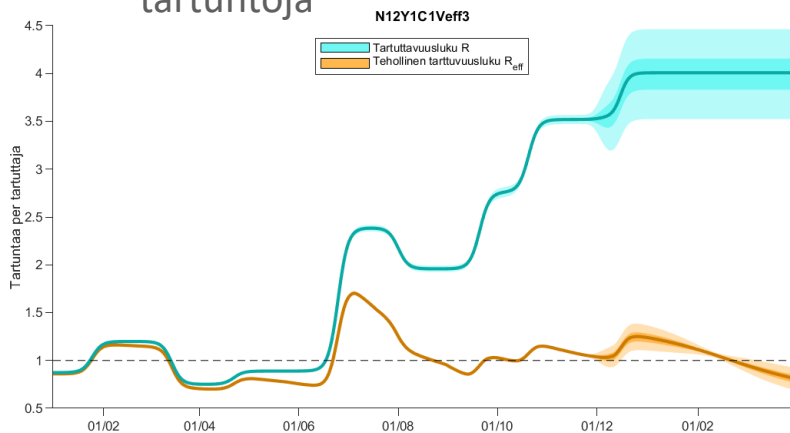


Nousu $R \rightarrow 4$, VE tartunnalle **-50%**

Rajoitetaan rokottamattomia aikuisia:
kontaktit -50%

→ Pelkkä rokottamattomien rajoittaminen ei enää riitä

- VE heikkenemisestä rokotetuille tartuntoja



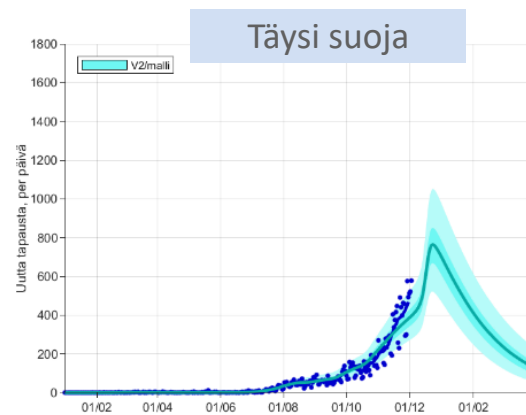
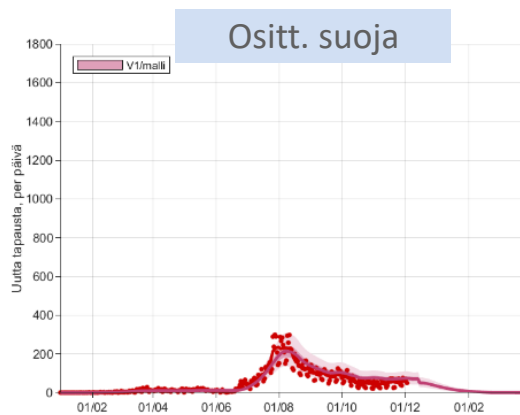
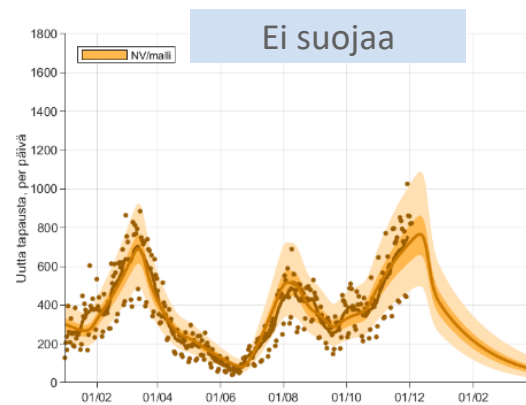
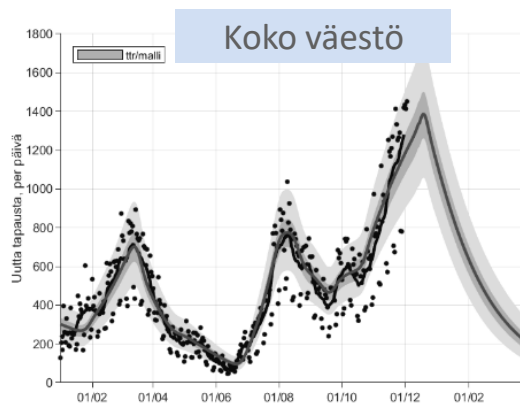
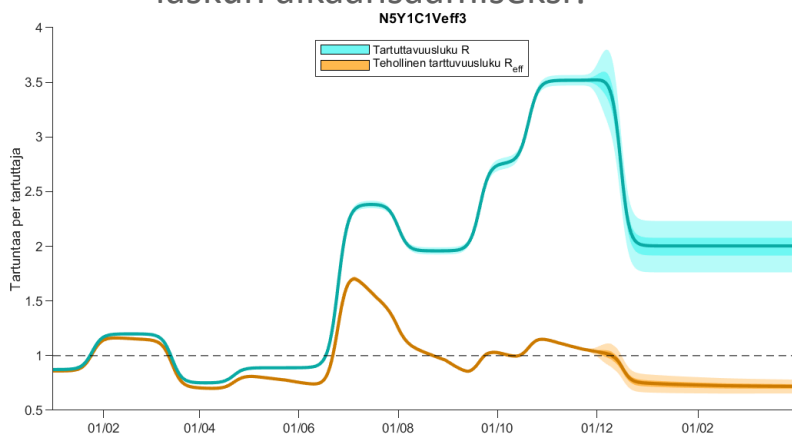
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Nousu $R \rightarrow 4$, VE tartunnalle **-50%**

Kaikille rajoituksia, kontaktit -50%
($R 4 \rightarrow 2$)

- Kääntää tartunnat jyrkkään laskuun
- Olisiko vähempikin riittänyt laskun aikaansaamiseksi?



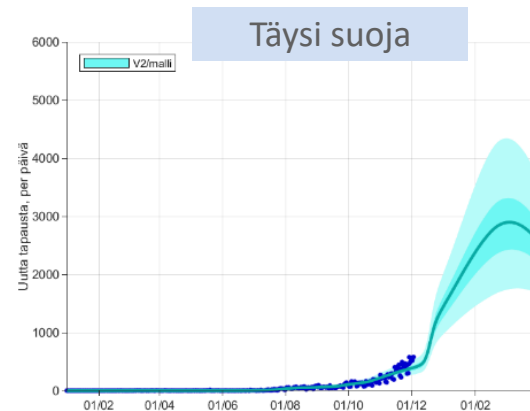
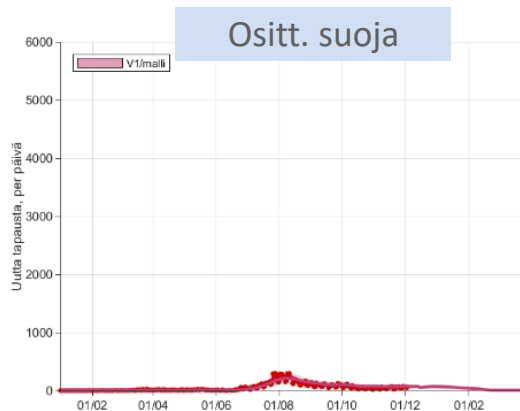
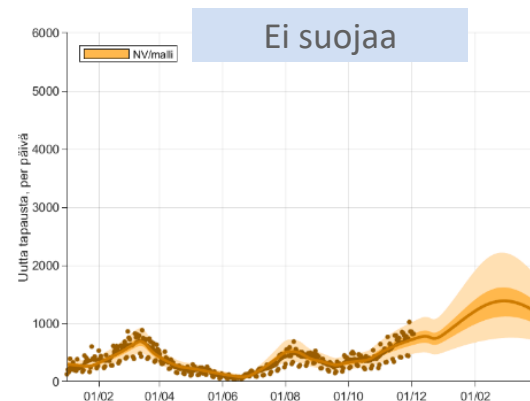
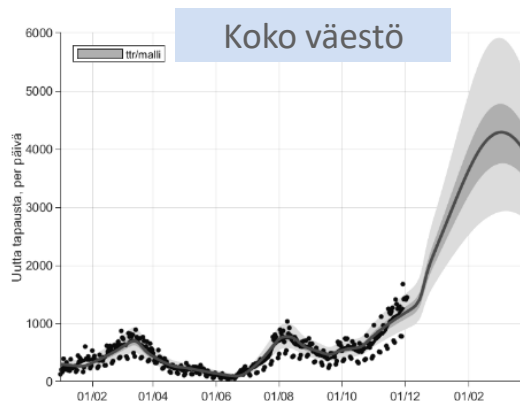
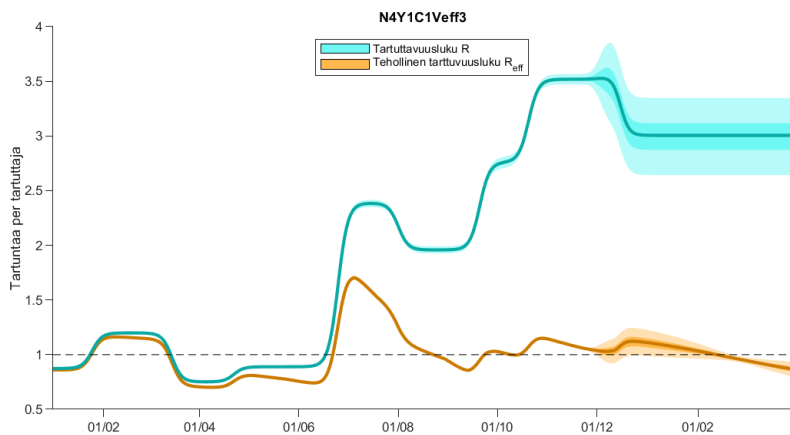
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Nousu $R \rightarrow 4$, VE tartunnalle **-50%**

Kaikille rajoituksia, kontaktit -25%
($R 4 \rightarrow 3$)

- Ei riitä tartuntojen nopeaan laskuun kääntämiseen



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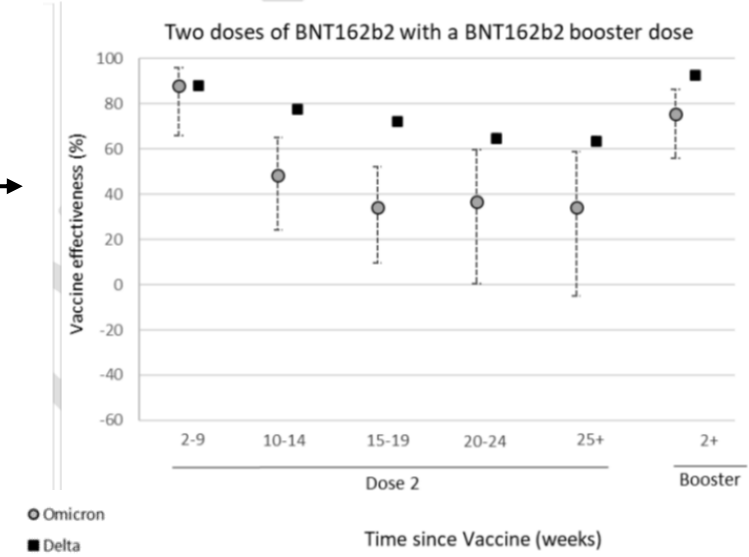
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Rajoitusten tarve

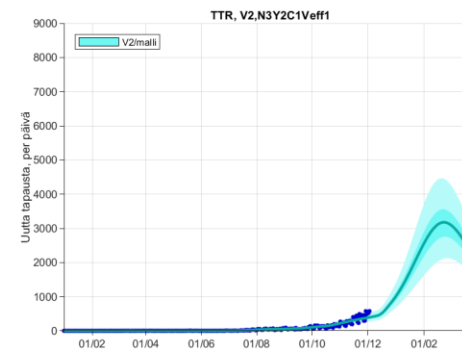
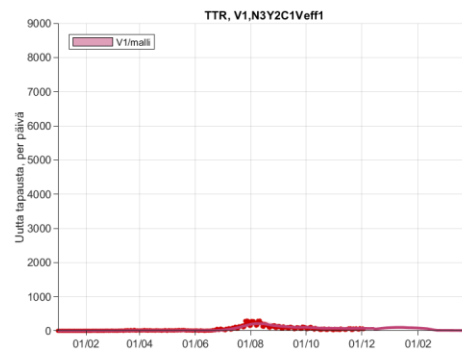
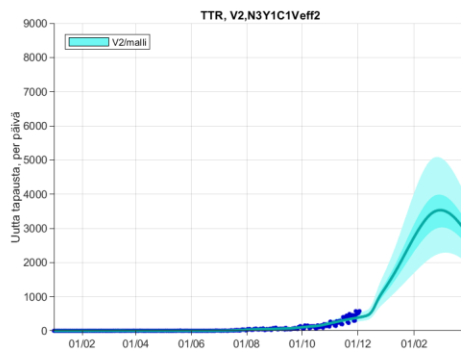
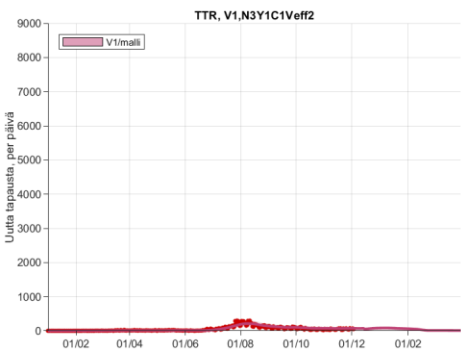
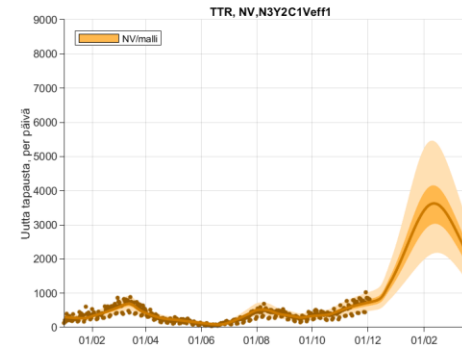
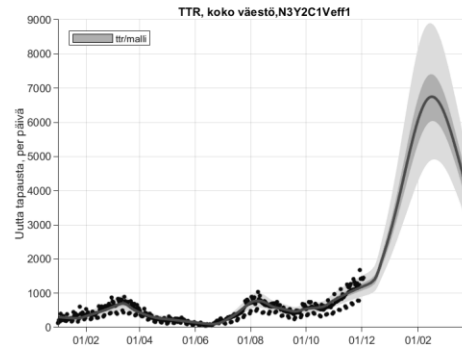
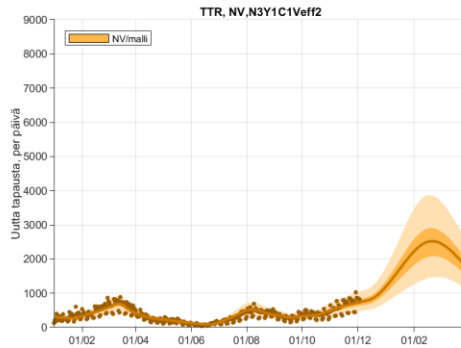
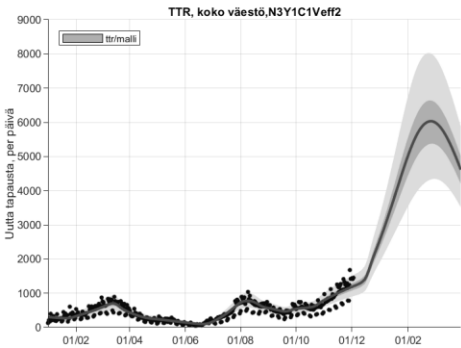
- Edellä R ja VE muutokset olivat esimerkinomaisia!
- Rajoitusten tarpeen luonne ja vahvuus riippuu siitä, miten ja miten paljon variantti poikkeaa aiemmista
 - 20-50% VE lasku mahdollinen? →
- Mahdollisten rajoitusten aikana rokottamisen on edistytävä
 - Kompensoi VE alentumista



Johtopäätösten tekeminen tapausmäärän kasvusta?

R = 4 , VE -20%

R → 5 (+25%), VE sama



Samankaltaisten tapausmäärien nousujen taustalla voi olla erilaiset syyt. Syy selvittäminen vaatii lisätarkasteluja.

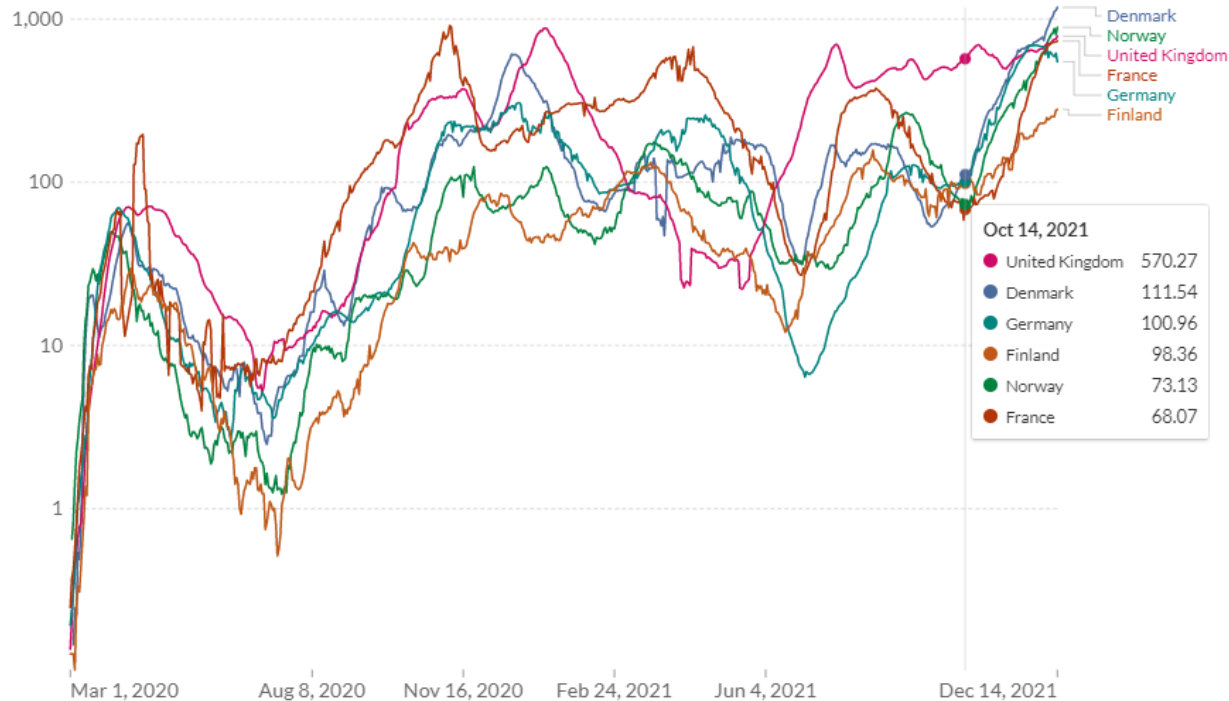
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Daily new confirmed COVID-19 cases per million people

7-day rolling average. Due to limited testing, the number of confirmed cases is lower than the true number of infections.

Our World
in Data

LINEAR LOG



Source: Johns Hopkins University CSSE COVID-19 Data

CC BY

▶ Jan 29, 2020 ◉ Dec 14, 2021

CHART

MAP

TABLE

SOURCES

DOWNLOAD

◉

Myös delta on hyvin
potentiaalinen
leviämään

Lopuksi

- Edellä kuvaajat eivät ole minkään sortin ennusteita
 - Variantin potentiaalisten ominaisuuksien aikaansaamien epidemiologisten ilmiöiden laskennallista tarkastelua
- Jos ominaisuudet poikkeavat paljon asetetuista, myös kuvaajat voivat poiketa paljon