MOCOS assumptions in agent-based modelling

Common assumptions

 - range of q (probability of detecting mild symptom infections): 0.07 - 0.13

- range of b (probability of successful contact tracing): 0.37 - 0.43

- range of f (level of restrictions): 0.485 - 0.515 for the summer wave, 0.097 - 0.103 for autumn/winter wave (seasonal effect on f)

- Houshold structure according to Saxonian microcensus

- pathogeny of virus variants like BA.2 described in Bulletin 22

Assumptions for the hypothetical scenarios for Autumn/Winter 2022
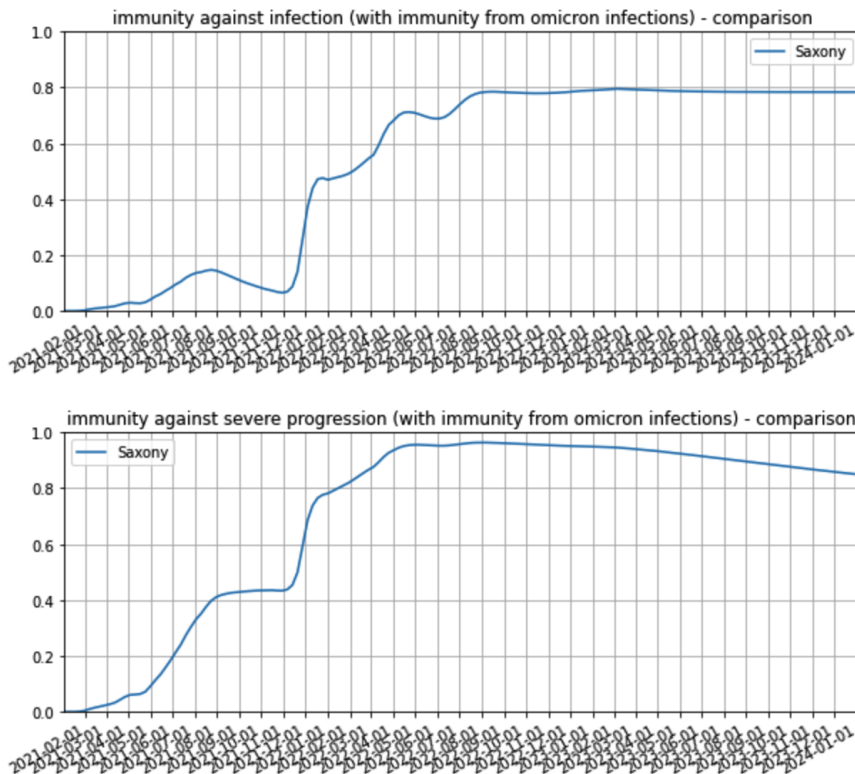
A. for the second wave of ba5:
- we import 5 BA5 infections every day from July 19 2022 until end of the simulation
- immunity after delta against ba5: 40%
- immunity after omicron against ba5: 60%
- immunity after ba5 against ba5: 80%

B. for the theoretical wave of ba6:
- we import 20 BA6 infections on Aug 20, 2022.
- immunity after delta against ba6: 0%
- immunity after omicron against ba6: 40%
- immunity after ba5 against ba6: 60%

Immunity curve Scenario A: BA4./BA.5 remain dominant:

This graph summarizes the assumed immunity of the whole Saxonian population WITHOUT considering immunity resulting from infection of BA4./BA.5 occurring during the Autumn and Winter 2022.

immunity against infection (with immunity from omicron infections) - comparison

immunity against severe progression (with immunity from omicron infections) - comparison

Immunity curve Scenario B: Protection from infection with "BA.X"

This graph summarizes the assumed immunity of the whole Saxonian population WITHOUT considering immunity resulting from infection of "BA.X" occurring during the Autumn and Winter 2022.

immunity against infection (with immunity from omicron infections) - comparison

immunity against severe progression (with immunity from omicron infections) - comparison