

Evaluating and optimizing COVID-19 vaccination policies: a case study of Sweden

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April 7, 2021

Abstract

We evaluate the efficiency of vaccination scenarios for COVID-19 by analysing a data-driven mathematical model. Healthcare demand and incidence are investigated for different scenarios of transmission and vaccination-schemes. Our results suggest that reducing the transmission rate affected by invading virus strains, seasonality and the level of prevention, is most important. Second to this is timely vaccine deliveries and expeditious vaccination management. Postponing vaccination of antibody-positive individuals reduces also the disease burden, and once risk groups have been vaccinated, it is best to continue vaccinating in a descending age order.

Joint work with Joacim Rocklöv and Henrik Sjödin