

**Figure 4. Retrospective prediction of New York vaccination for comparing real data.** The blue line in **a** represents the predicted trend for the pandemic progression without vaccination after December 15, 2020. The red area represents the integral of the true pandemic for 100 days from December 16, 2020, to March 26, 2021. The green curve in **b** represents the integral of the predicted trend of vaccination scenario in the same period in New York.