

Covid-19 certificates based on data from national registries: A peek behind the scenes

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Background

The use of Norwegian registry data in the covid-19 certificates: Challenges, advantages, and assessments made when using real-time registry data

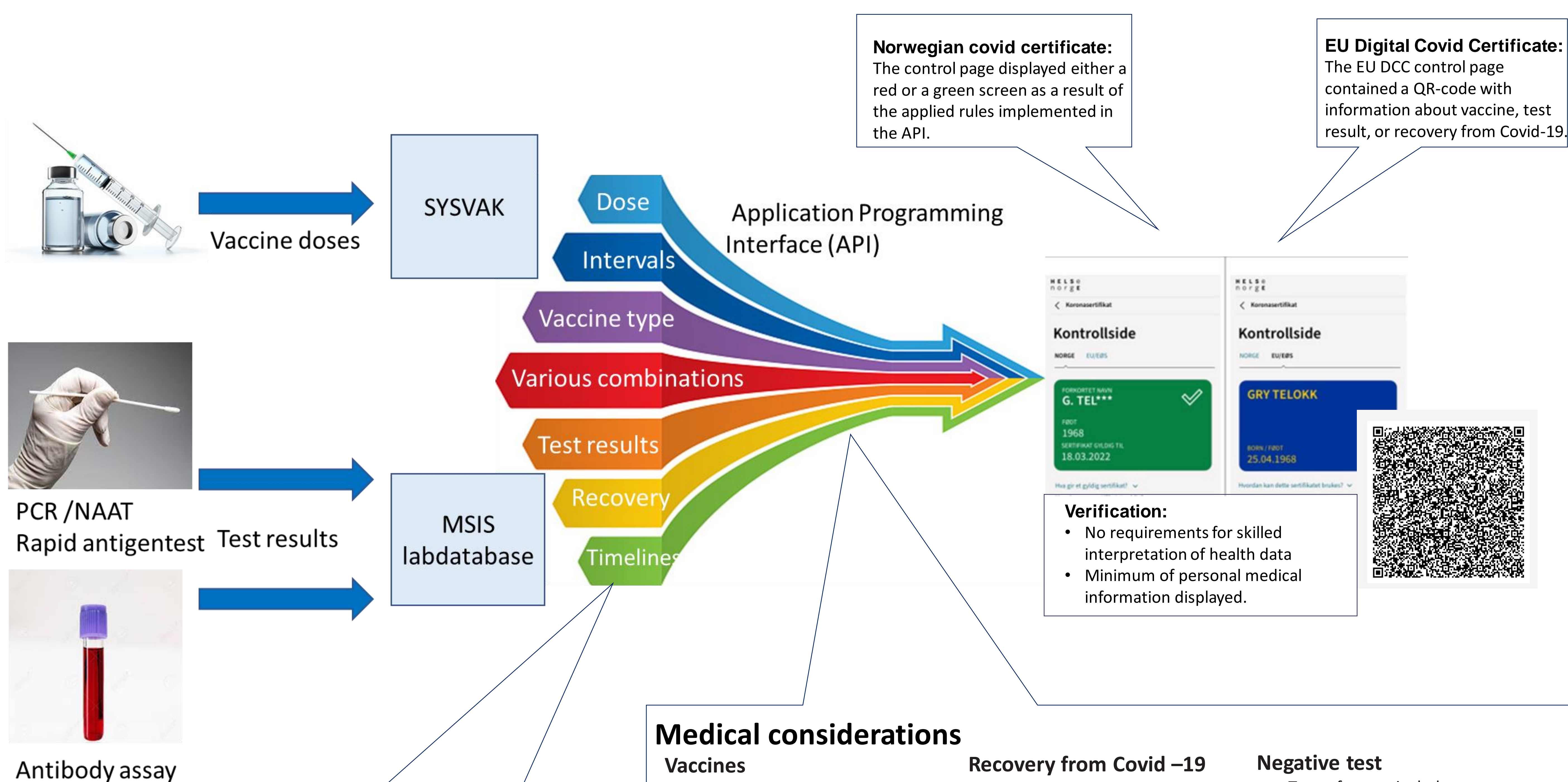
- During the Covid-19 pandemic, the EU implemented the EU Digital COVID Certificate (EU DCC) to help facilitate free movement and travel within the EU for citizens from both EU and other countries.
- The health authorities in Norway decided to implement a certificate for Norwegian citizens, compatible with the EU DCC gateway and EU requirements.
- An amendment of the Act related to Control of Communicable Diseases (Smittevernloven) was required to form the legal basis for the certificates
- EU specified certain requirements for the certificate, but every country could decide individual rules based on national regulations and recommendations.
- In addition to the EU DCC, a Norwegian version was developed for national use.
- Both certificates were based on data from national health registries, and an infrastructure using Application Programming Interface (API) was developed, combining data from several registries and applying rules for interpretation of the combined data.
- The certificates were made available for Norwegian citizens on the National Online Health Services in Norway website (Helsenorge.no).

The Norwegian Immunization Registry SYSVAK

- A national, electronic immunization registry recording an individual's vaccination status and vaccination coverage in Norway
- Mandatory registration of all vaccinations of Norwegian citizens, with reference to the SYSVAK regulation.
- Electronically registration of Covid-19 vaccinations immediately after administration.
- Registrations through electronic patient record systems following national standards from ebXML messaging exchange.
- Data are available and can be accessed at Helsenorge.no immediately upon registration

Norwegian Surveillance System for Communicable Diseases' (MSIS) Laboratory Database

- A national microbiological laboratory database.
- Test results for Covid-19 are received in a standardized format from all microbiology laboratories in Norway, from covid-19 test stations, and from other health institutions
- Test results are available at Helsenorge.no within a few minutes
- Changes in the MSIS regulation enables the keeping of personal identifiers linked to test results, providing the opportunity for submitting real time data to the Covid-certificates



Medical considerations

Vaccines

- Vaccines to be included
- Vaccination abroad
- Recovery from Covid-19 with only one dose
- Interval between doses
- Contraindication for vaccination

Recovery from Covid –19

- False positive rapid antigen test results
- Time from infection
- Isolation rules
- Infection abroad
- Combinations with vaccine doses

Negative test

- Type of test to include
- Test information (only in EU) for rapid antigen tests
- False negative results
- Variation of valid time of the test result between different EU member states

Limitations:

Legal:

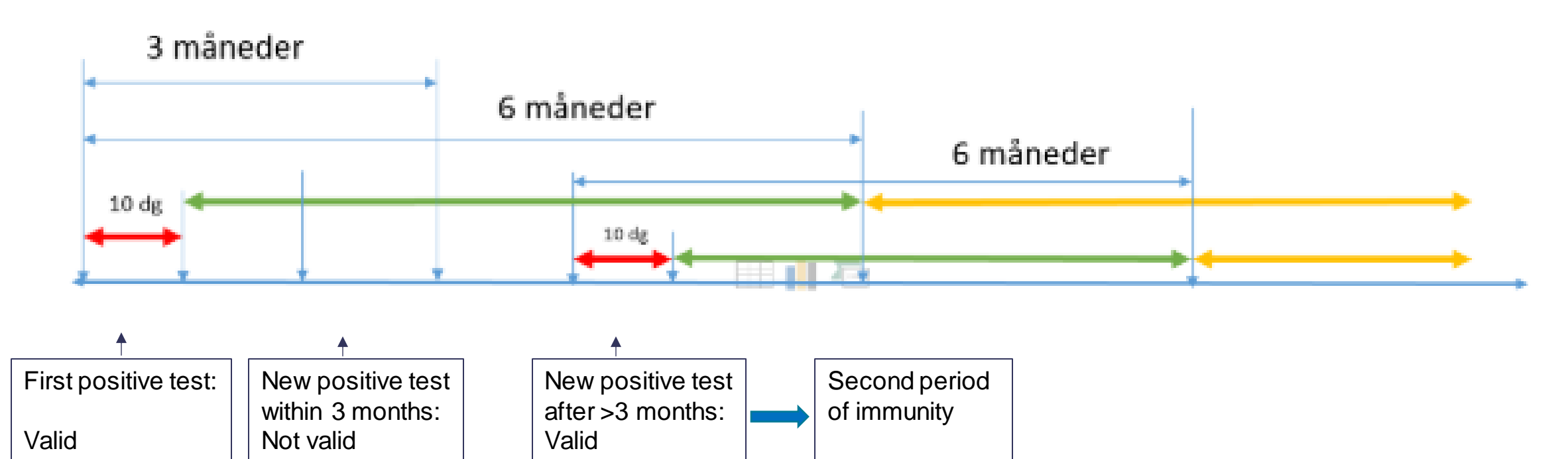
- MSIS – only infections detected in Norway
- Only EMA approved vaccines

Technical:

- Only persons with FNR or DNR
- Difficult interpretation of test results

Medical:

- Infection not confirmed with laboratory test
- No clinical data available



Conclusions

- Registry data was an effective and secure data source for real time use
- The certificate was discriminatory for individuals not recorded in the registries because of legal or medical limitations
- The combination of having high quality registry data and widely available digital reporting systems was crucial for effective implementation of reliable covid-19 certificates
- Improved quality control: Covid-certificates worked as an incentive for citizens to confirm the correctness of individual data in the registries
- The purpose of the source registries is surveillance, and it remains to determine whether increased focus on a direct, real-time use of the data interfered with this