

Design, implementation and assessment of a drive-through flu mass-vaccination program in Italy

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Problem:

The SARS-CoV-2 pandemic has completely changed health systems around the world.

As part of a mass immunization campaign with COVID-19 vaccines, it was necessary to study new methods to vaccinate a large number of people in a short time and in complete safety.

Description of the problem:

To ensure the requirements of speed, safety and low cost, we therefore designed an EBM model of drive-through flu-vaccination, built in the city of Rivalta di Torino (about 20,000 inhabitants), in Northern Italy, on two Saturdays in November 2020. The project was created by Public Health Residents with the collaboration of the Municipality, a team of Family Doctors and Civil Protection.

Results:

We measured driving time for each vehicle from the check-in station to the parking zone designed for the 15min post-vaccination follow-up. We calculated the mean length of stay time (LOS) and the mean time per person based on the number of individual vaccinations given per vehicle. In two days, 1539 vaccines were administered. Flows were only timed on the first day (417 vehicles and 672 vaccines). The highest percentage of cars (47%) received only one vaccination per vehicle, followed by 2 (45.8%), 3 (6.2%), and 4 (1%) vaccines per vehicle. The optimal number of vaccinations per vehicle to maximize efficiency was 4: the average LOS per vaccination decreased from 2.54 minutes per person (1 vehicle=1 person) to 0.34 seconds per person (1 vehicle=4 people). The mean LOS time was 3.06min (SD1.11).

Lessons:

This model appeared as a real possibility to start a rapid, effective, safe and low-cost mass-vaccination program in the Italian setting. It also seems to be appreciated by the population, not only in terms of novelty but also for the sense of security and speed of the process. For this reason, in April 2021, the same model was successfully applied in the same area for COVID-19 vaccination.

Key messages:

- The drive-through model appeared as a real possibility to start a rapid, effective, safe and low-cost mass-vaccination program in the Italian setting.
- The Pandemic has changed the needs and methods of carrying out common health practices: the drive-through model has proved to be a valuable resource for mass vaccination.