

ESCAIDE 2020 abstract

Submission track:

Disease group - Influenza and other respiratory viruses

Health function – implementation science

Title: Brand-specific influenza vaccine effectiveness against laboratory-confirmed influenza in Europe – results from the DRIVE network 2019/20

Authors: see table below

Keywords: “Influenza, Human”; “Vaccination”; “Epidemiological Measurements”; “Observational Study”; “Europe”; “Public-Private Sector Partnerships”

Preferred Presentation Method: oral

Abstract (275 words)

DRIVE (Development of Robust and Innovative Vaccine Effectiveness) is a IMI funded public-private platform that aims to annually estimate brand-specific influenza vaccine effectiveness (IVE), for public health and regulatory purposes. IVE analyses and interpretation are conducted by public partners in the consortium.

In 2019/20, four primary care-based test-negative design (TND) studies (Austria, England, Italy (n=2)), eight hospital-based TND studies (Finland, France, Italy, Romania, Spain (n=4)), and one population-based cohort study (Finland) were conducted. The COVID-19 outbreak impacted influenza surveillance, therefore the study period was truncated on February 29, 2020. Site-specific confounder-adjusted IVE estimates were centrally calculated and pooled through meta-analysis.

TND studies included 2235/2729 primary care-based cases/controls and 1296/2826 hospital-based cases/controls. IVE (95% CI) against influenza-like illness due to any influenza in children 6m-17y was 64% (44%-80%) for any vaccine, 81% (58%-92%) for Fluarix Tetra and 61% (38%-77%) for Vaxigrip Tetra. IVE (95% CI) against severe acute respiratory infection due to any influenza in adults $\geq 65y$ was 36% (7%-71%) for any vaccine and 52% (27%-68%) for Fluad.

The population-based cohort covered 126,872/384,982 vaccinated/unvaccinated person-years. IVE (95% CI) of Fluenz Tetra was 64% (54%-73%) against influenza A and 80% (55%-91%) against influenza B in children aged 2-6y. IVE of Vaxigrip Tetra was 71% (54%-81%) against influenza A and 64% (12%-86%) against influenza B in children 6m-6y, and 27% (18%-35%) against influenza A and 64% (24%-83%) against influenza B in adults $\geq 65y$.

DRIVE is a growing platform. In 2019/20, the first precise brand-specific estimates were obtained from TND studies. In the next season, DRIVE will explore COVID-19 impact on IVE. Public health institutes with surveillance data and non-pediatric hospitals are encouraged to join DRIVE.

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