Rotavirus vaccines

Cost-effectiveness study

Systematic review of rotavirus vaccination in high-income settings utilising dynamic transmission modelling techniques

MERCK

Objective

To synthesise evidence on the **cost-effectiveness** of rotavirus vaccine in high-income settings from studies based on **dynamic transmission modelling**.

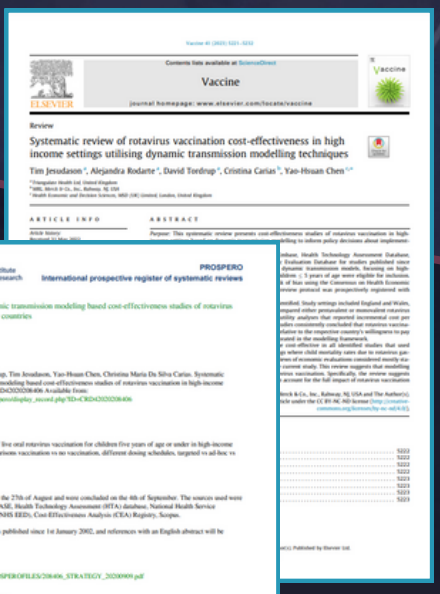
Methods

A **systematic review** was conducted of **full economic evaluation studies based on dynamic transmission models** and other inclusion criteria. Included studies were appraised for **quality and risk of bias** using the Consensus on Health Economic Criteria (CHEC) list and the Philips checklist. The review protocol was prospectively **registered with PROSPERO**.

Key Messages

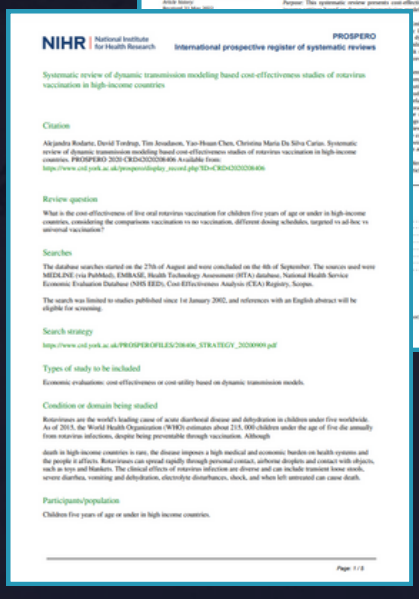
- Rotavirus vaccination was found to be **cost-effective** in all identified studies that used dynamic transmission models in high-income settings, where child fatality rate due to rotavirus is close to zero.
- **Choice of modelling techniques** could have significantly influenced cost-effectiveness evaluation results for rotavirus vaccination.

Research impact


Vaccine

Review

Systematic review of rotavirus vaccination cost-effectiveness in high income settings utilising dynamic transmission modelling techniques


NIHR | National Institute for Health Research

PROSPERO

International prospective register of systematic reviews

Systematic review of dynamic transmission modeling based cost-effectiveness studies of rotavirus vaccination in high-income countries

Citation

Review question

Searches

Search strategy

Types of study to be included

Condition or domain being studied

Participants/population

Publication

"Systematic review of rotavirus vaccination in high-income settings utilising dynamic transmission modelling techniques" was published in **Vaccine**.

Protocol

"Systematic review of dynamic transmission modeling based cost-effectiveness studies of rotavirus vaccination in high-income countries (Protocol)" was prospectively registered with PROSPERO (CRD42020208406).

Rotavirus vaccines

Strain circulation

Rotavirus strain circulation in Europe and the Middle East: systematic literature review (Ongoing)

Objective

To synthesise evidence on the **prevalence** of rotavirus genotypes after vaccine introduction in Europe and the Middle East.

Methods

Three systematic reviews were conducted following the principles in the Cochrane Handbook. A search strategy was developed to identify **empirical epidemiological studies** presenting genotype specific data, and following the inclusion criteria.

Key Messages

- The studies provide an **update** on rotavirus genotype prevalence across multiple regions.
- **Continuous surveillance** is essential to monitor strain dynamics, discover novel variants, and plan targeted strategies.