Evidence Synthesis Ireland Fellowship Scheme
Review Identification Form

Review Centre/Group Mentor

Review centre: Evidence Synthesis Ireland and Cochrane Ireland Group mentor: Dr. Petek Eylul Taneri

Review title

Monoclonal antibodies (MAbs) for prevention of respiratory syncytial virus (RSV) in infants and children

Review type and methods

A systematic review and meta-analysis of randomized controlled trials (RCTs) will be carried out to evaluate the effectiveness and safety of various monoclonal antibodies in preventing respiratory syncytial virus (RSV) infection in infants and children. During this fellowship, the researcher will learn: • Comprehensive literature search techniques. • Data extraction and analysis methods. • Critical appraisal of research studies for quality and bias. • Statistical analysis techniques specific to meta-analysis. • Writing and reporting findings according to established guidelines. • Collaborative teamwork and project management skills.

Other information

A previously published systematic review and meta-analysis, which conducted its literature search in March 2022, exists on this subject. We intend to conduct our literature search in June 2024. Our results will provide updated findings on the topic.

Review information

The systematic review has been funded by European Health and Digital Executive Agency (HaDEA) under a service contract with ESI and Cochrane Ireland.

Review details

Subject to change

Population:

- Infants and children
- No restriction on sex, ethnicity, or geographic location
- No restriction on medical history, i.e., healthy individuals, immunocompromised individuals, , and participants with co-morbidities will be considered

Intervention:

Monoclonal antibodies

Comparisons:

1. Placebo or no intervention or vaccine directed against RSV
2. One MAb with another MAb
3. Same MAb at different dosages and the same dosing schedule
4. Same MAb with different dosing schedules and the same dosages
5. A MAb with vaccines such as live attenuated RSV vaccines

Outcomes:

<u>Efficacy/effectiveness:</u>

- Frequency of RSV infection (both lower and upper respiratory infection) confirmed by laboratory test (i.e., polymerase chain reaction (PCR) testing, culture, antigen tests, etc.)
- Hospitalisation due to RSV disease (both lower and upper respiratory infection) confirmed by laboratory tests (i.e., antigen tests, direct antibody (DFA), polymerase chain reaction (PCR) testing, culture, etc.)
- Measures of symptomatology (symptom scores, duration of symptoms, oxygen requirement, critical care requirement etc.)
- Antibiotic usage
    - reported as prescription rate, clinician or self-reported antibiotic use, antibiotic purchases, or the number of antibiotic days/courses.
- Acute otitis media (AOM)
- Admission to an intensive care unit
- Duration of stay in an intensive care unit
- Requirement for invasive ventilation
- Duration of hospitalisation
- Mortality from illness caused by RSV
- Duration of protection (against any of the above-mentioned outcomes)
- Long term outcomes
    - Development of asthma
    - Reduced functional capacity [adults-all]
    - Requirement for rehabilitation stay due to potential adverse events

<u>Safety outcomes</u>

- All adverse events, including
    - Solicited adverse events
        - local (redness, swelling, pain/tenderness) and
        - systemic reactions (fever, fatigue etc.)
    - Unsolicited adverse events (spontaneously reported/ other adverse events)
- All serious adverse events (SAEs) related to intervention, including neurological disorders such as Guillain-Barre Syndrome.
- Adverse events of particular interest (AESI): breakthrough infections

Review current status

The protocol is being drafted.

Any specific/desirable requirements for fellow (e.g. clinical expertise, methodological expertise)

Clinical expertise in infectious diseases, immunology, vaccinology, or public health is necessary.

Estimated start and completion dates*

Estimated start date: June 2024 Estimated completion date: June 2025