

Technology Guidance

RSVpreF maternal vaccine

for prevention of respiratory syncytial virus-associated lower respiratory tract disease in infants

Technology Guidance from the MOH Drug Advisory Committee

Guidance Recommendations

The Ministry of Health's Drug Advisory Committee has not recommended RSVpreF maternal vaccine for inclusion on the MOH Subsidised Vaccine List (SVL) for active immunisation of pregnant individuals at 32 through 36 weeks' gestation to prevent respiratory syncytial virus-associated lower respiratory tract disease in infants from birth through six months of age. The decision was based on the unfavourable cost effectiveness of RSVpreF compared with no immunisation.

Technology evaluation

- 1.1. At the July 2026 meeting, the MOH Drug Advisory Committee (“the Committee”) considered the evidence presented for the technology evaluation of RSV prefusion F protein maternal vaccine (RSVpreF) for active immunisation of pregnant individuals, for the prevention of respiratory syncytial virus-associated lower respiratory tract disease (RSV-LRTD) in infants from birth through six months of age. The Agency for Care Effectiveness (ACE) conducted the evaluation in consultation with clinicians at public healthcare institutions (PHIs) and the Expert Committee on Immunisation (ECI).
- 1.2. Clinical and economic evidence for RSVpreF was considered based on its pivotal trials, which enrolled pregnant individuals at 24 to 36 weeks’ gestation. This was broader than the registered population of pregnant individuals at 32 through 36 weeks’ gestation. RSVpreF is also registered for the prevention of RSV-LRTD in individuals 60 years and older, and those aged 18 through 59 years at increased risk for RSV-LRTD; these populations were outside the scope of this evaluation.
- 1.3. The evidence was used to inform the Committee’s deliberations around four core decision-making criteria:
 - Clinical need of patients and nature of the condition;
 - Clinical effectiveness and safety of the technology;
 - Cost effectiveness (value for money) – the incremental benefit and cost of the technology compared to existing alternatives; and
 - Estimated annual technology cost and the number of patients likely to benefit from the technology.
- 1.4. Additional factors, including social and value judgments, may also inform the Committee’s funding considerations.

Clinical need

- 2.1 RSV is a common cause of respiratory illness in infants and young children in Singapore, with infants at high risk of severe disease particularly susceptible to poor outcomes such as hospitalisation and death. They include those born preterm or with chronic lung disease, congenital heart disease, neuromuscular disorders or who are immunocompromised. The Committee had therefore considered the clinical need for RSV immunisation at its April 2026 meeting during its review of nirsevimab, a long-acting monoclonal antibody (mAb) administered directly to infants to provide passive immunisation against RSV.

- 2.2 The Committee noted the previously considered treatment context, including that RSV immunisation is not routine practice for the general infant population and no RSV immunisation products are included on the MOH Subsidised Vaccine List (SVL). The Committee noted that nirsevimab was not recommended for subsidy at the April 2026 meeting, and that clesrovimab, another long-acting mAb for RSV prevention, was being considered concurrently at the July 2026 meeting. These considerations were taken into account in the Committee's July 2026 review of RSVpreF, a maternal vaccine administered to pregnant individuals to stimulate maternal production of antibodies that provides passive immunisation to infants via transplacental transfer.
- 2.3. The Committee acknowledged local clinical experts' advice that infant RSV immunisation may still be required following maternal vaccination for infants at high risk of severe RSV disease, where maternal vaccine response may be inadequate due to maternal immunocompromise, where maternal antibodies may have been lost following cardiopulmonary bypass or extracorporeal membrane oxygenation, or where infants are born less than 14 days after maternal vaccination.

Clinical effectiveness and safety

RSVpreF versus no immunisation

- 3.1 The Committee reviewed clinical evidence from two randomised controlled trials (RCT; RSVpreF Phase 2b and MATISSE) comparing RSVpreF with no immunisation in the broad intention-to-treat (ITT) population of pregnant individuals at 24 to 36 weeks' gestation. They noted that the registered population was restricted to the subgroup of pregnant individuals at 32 to 36 weeks' gestation, to avoid any potential risk of preterm birth with the use of RSVpreF. Hence, the Committee also reviewed subgroup results from these RCTs.
- 3.2 Both RCTs showed that RSVpreF led to reductions in the incidence of medically attended RSV lower respiratory tract infection (MA RSV-LRTI), severe MA RSV-LRTI and RSV hospitalisation up to 180 days after birth in the ITT populations, compared to no immunisation. Subgroup results for pregnant individuals at 32 to 36 weeks' gestation were generally consistent with the ITT results for all three endpoints. However, the magnitude of treatment effect observed in the subgroup analyses was uncertain due to the relatively smaller number of cases, the post-hoc nature of the analyses and the lack of adjustment for multiple comparisons.
- 3.3 Based on the available evidence, the Committee concluded that RSVpreF was superior in efficacy to no immunisation for the prevention of RSV-LRTD in infants, notwithstanding the uncertain magnitude of effect in the subgroup results.

- 3.4 The Committee noted the lack of comparative RCT evidence for RSVpreF in pregnant individuals at increased risk of preterm birth or other complications, subsequent pregnancies with or without revaccination, multiple pregnancies, and sequential maternal vaccination followed by infant RSV immunisation.
 - 3.5 In terms of safety, RSVpreF was inferior to no immunisation given the higher rate of injection site pain. The Committee noted the numerical increases in preterm birth and low birth weight observed with RSVpreF but acknowledged that the evidence was insufficient to establish or exclude a causal relationship, consistent with the U.S. Food and Drug Administration's conclusion.
- RSVpreF versus nirsevimab or clesrovimab
- 3.6 In the absence of head-to-head trials, the Committee relied on indirect treatment comparisons (ITCs) between RSVpreF and nirsevimab based on the available evidence. Although the ITC results for MA RSV-LRTI and RSV hospitalisation at 150 and 180 days favoured nirsevimab, the Committee considered the results unreliable due to limited trial exchangeability arising from the different approaches to maternal vaccination and infant immunisation.
 - 3.7 The Committee acknowledged that any ITCs between RSVpreF and clesrovimab would be subject to similar limitations in trial exchangeability, including differences in populations, timing of administration, outcome definitions, and endpoint assessment.
 - 3.8 Overall, the comparative efficacy of RSVpreF versus nirsevimab or clesrovimab remained uncertain.
 - 3.9 The Committee considered RSVpreF, nirsevimab and clesrovimab to have different safety profiles. The most frequently reported adverse events were neonatal jaundice, preterm birth and low birth weight with RSVpreF; upper respiratory tract infections (URTI), nasopharyngitis and pyrexia with nirsevimab; and irritability, URTI and drowsiness with clesrovimab.

Cost effectiveness

- 4.1. The Committee reviewed a cost-effectiveness analysis conducted by ACE that compared RSVpreF with no immunisation in pregnant individuals vaccinated between 32 and 36 weeks of gestation. At the price proposed by the company, the Committee considered the base-case incremental cost-effectiveness ratio (ICER) of between SG\$165,000 and SG\$205,000 per quality-adjusted life year (QALY) gained to be unacceptably high.

- 4.2. The Committee noted that based on one-way sensitivity and scenario analyses, the key drivers included the cost of RSVpreF and RSV-associated mortality rates during hospitalisation. When these parameters were varied within their uncertainty ranges, the ICERs remained unfavourably high.
- 4.3. Overall, the Committee considered that, at the price proposed by the company, RSVpreF did not represent a cost-effective use of healthcare resources for prevention of RSV-associated LRTD in infants from birth through six months of age.

Estimated annual technology cost

- 5.1. The Committee noted that the cost impact to the healthcare system (including PHIs and Community Health Assist Scheme [CHAS] clinics) was estimated to be between SG\$1 million and SG\$3 million per year, in the first five years of listing RSVpreF on the MOH Subsidised Vaccine List for prevention of RSV-associated LRTD in infants from birth through six months of age.

Recommendations

- 6.1. Based on available evidence, the Committee recommended not listing RSVpreF on the MOH Subsidised Vaccine List for active immunisation of pregnant individuals at 32 through 36 weeks' gestation to prevent RSV-associated LRTD in infants from birth through six months of age. The decision was based on the unfavourable cost effectiveness of RSVpreF compared with no immunisation.

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About the Agency

The Agency for Care Effectiveness (ACE) was established by the Ministry of Health (Singapore) to drive better decision-making in healthcare through health technology assessment (HTA), clinical guidelines, and education.

As the national HTA agency, ACE conducts evaluations to inform government funding decisions for treatments, diagnostic tests and vaccines, and produces guidance for public hospitals and institutions in Singapore.

The guidance is not, and should not be regarded as, a substitute for professional or medical advice. Please seek the advice of a qualified healthcare professional about any medical condition. The responsibility for making decisions appropriate to the circumstances of the individual patient remains with the healthcare professional.

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