1 in 5 pregnant people found to lack measles immunity

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Researchers from Children's Hospital of Philadelphia (CHOP) and the Perelman School of Medicine at the University of Pennsylvania found that one in five newborn babies may not have measles antibodies passed

down from their mothers, suggesting that other strategies may need to be considered in case of an outbreak that affects babies before they can receive their measles, mumps and rubella (MMR) vaccine at 12 months of age.

The findings were published today in a research letter in the *Journal of the American Medical Association* (*JAMA*).

The study analyzed biobank serum samples collected from 550 patients who were admitted to hospitals for childbirth between April and October of 2021. Serum samples were tested for rubella and measles. Rubella is usually tested at the time of pregnancy, but not measles.

Of the 513 patients who had an available serum sample for measles testing, 103 of those 513 patients (20.1%) were seronegative. Additionally, the study did not find that rubella serostatus was an effective indicator of whether measles antibodies were present.

While there are other tests available to determine whether a patient has immunity to the measles virus, these findings indicate that infants born to mothers who are seronegative are not being born with immunity to measles that is naturally passed down from the mother.

"There may be other ways to determine whether the mother has immunity, but their babies definitely do not have that immunity if their mothers are testing seronegative for measles antibodies," said Dustin Flannery, DO, a CHOP neonatologist at Pennsylvania Hospital.

"The challenge then becomes, in the event of an outbreak, what is the right course of action to make sure infants younger than 12 months have at least some level of protection?"

The authors suggest that infants born to mothers who are seronegative

for measles antibodies may benefit from supplemental early vaccinations during outbreaks of the disease, a strategy that a previous study, published in *The Lancet Infectious Diseases*, had suggested as a possible means of improving immunity during an outbreak and is already employed as a strategy when traveling to areas where measles vaccination rates are low.

More information: Dustin D. Flannery et al, Measles Serostatus Among Parturient Patients at 2 Philadelphia Hospitals in 2021, *JAMA* (2023). DOI: 10.1001/jama.2023.0166

Nicola Principi et al, Early vaccination: a provisional measure to prevent measles in infants, *The Lancet Infectious Diseases* (2019). DOI: 10.1016/S1473-3099(19)30520-1

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