NIHR | Applied Research Collaboration

Impact Inclusion Innovation Investment

Sickness to prevention

Vaccination Uptake

ARC Northwest London

The challenge
Maternal vaccination programmes play a crucial role in protecting newborns and influencing parents' engagement with childhood immunisations. Evidence from a UK birth cohort study of 700,000+ children found that mothers vaccinated during pregnancy, particularly with the whooping cough vaccine, are 40% more likely to have their children receive the MMR vaccine, after accounting for deprivation and ethnicity. Children in more deprived areas, those of Black ethnicity, and those born to younger mothers are less likely to be vaccinated.

The approach
ARC Northwest London analysis of linked electronic health records from 450,000+ pregnancies among women in the local area found uptake of influenza and pertussis vaccines in pregnancy varied substantially by ethnicity, maternal age, and socio-economic status.

Co-production research with local communities found parents reported barriers such as difficulty booking GP appointments, limited flexibility, and inconsistent reminders. Parents also want more opportunities to discuss vaccine concerns with trusted healthcare professionals, often before appointments. Since COVID-19, confidence in routine vaccination remains high, but many parents, especially from ethnic minority backgrounds, report having more questions. Improving access, communication, and support during pregnancy and early childhood is vital to protect child health.

The outcomes and impact
The research findings have informed national childhood vaccine policy through evidence submitted to a Health and Social Care Select Committee inquiry and the Chief Medical Officer's annual report. They have also informed local authorities, the NHS, and wider health system initiatives to increase vaccine uptake.

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