

Coverage and Access Conditions of 4CMenB Vaccination Across Different Regions of Germany: A Retrospective Ecological Study



Regional variations in vaccine reimbursement may lead to inequity in access to 4cMenB vaccination in Germany

Digital poster



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Aims

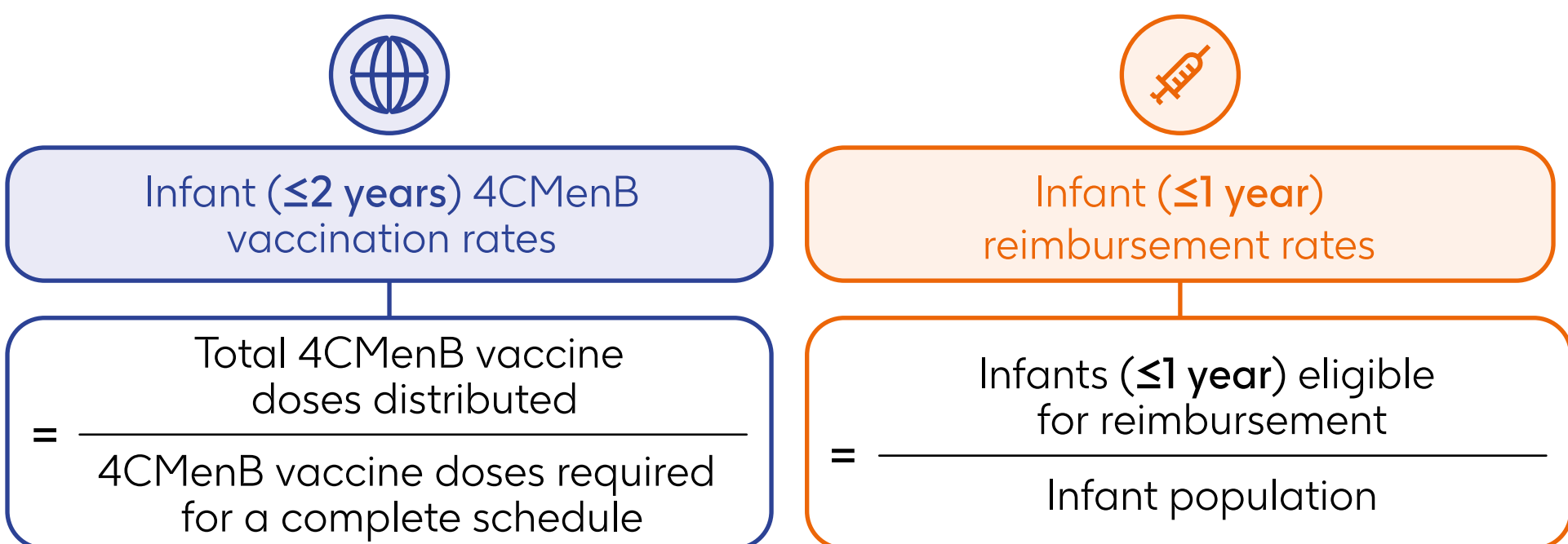


To estimate 2022 regional infant four-component meningococcal serogroup B (4CMenB) vaccine rates in Germany and the correlation between vaccination rates and voluntary reimbursement rates

Methods

- 4CMenB vaccine doses and the proportion of infants eligible for voluntary reimbursement were obtained per region for 2022
- 4CMenB vaccination and reimbursement rates were calculated (Figure 1)
 - To account for variation in the number of received doses, vaccination rate was estimated as total doses distributed (numerator) divided by doses required for a complete schedule (2 for newborns, 3 for 1-year-olds; denominator)
- Correlation between vaccination rates and reimbursement rates was calculated using Spearman's coefficient

Figure 1: Infant 4CMenB vaccination and reimbursement rate calculations

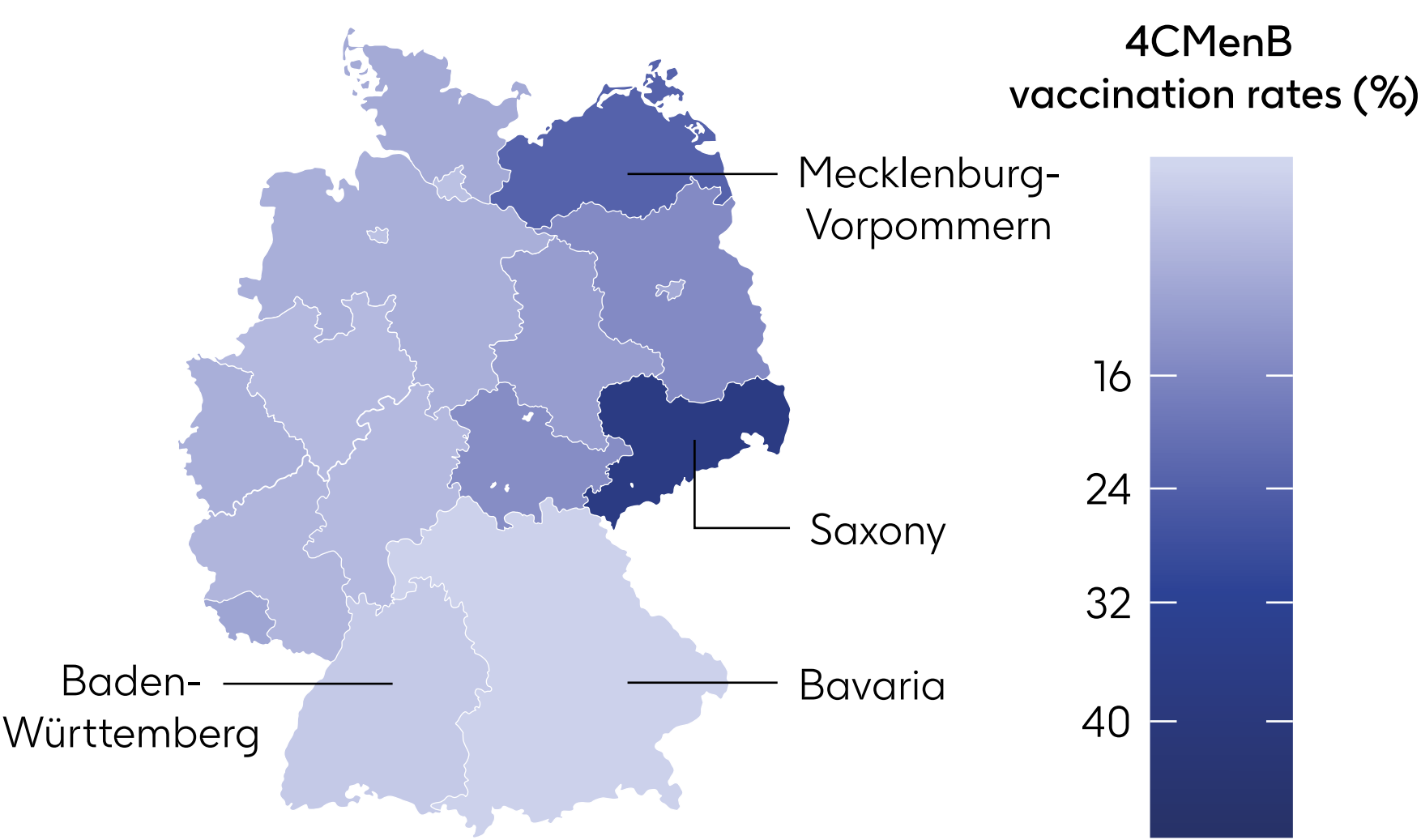


Results

Vaccination rates

- Among the 2022 infant population (≤2 years), national 4CMenB vaccine rate was 10.9%
- 4CMenB vaccine rates were highest in regions within eastern Germany, such as Saxony and Mecklenburg-Vorpommern (Figure 2)
- 4CMenB vaccine rates were lowest in Bavaria and Baden-Württemberg (Figure 2)

Figure 2: 4CMenB vaccination rates among infants (≤2 years) across German regions in 2022

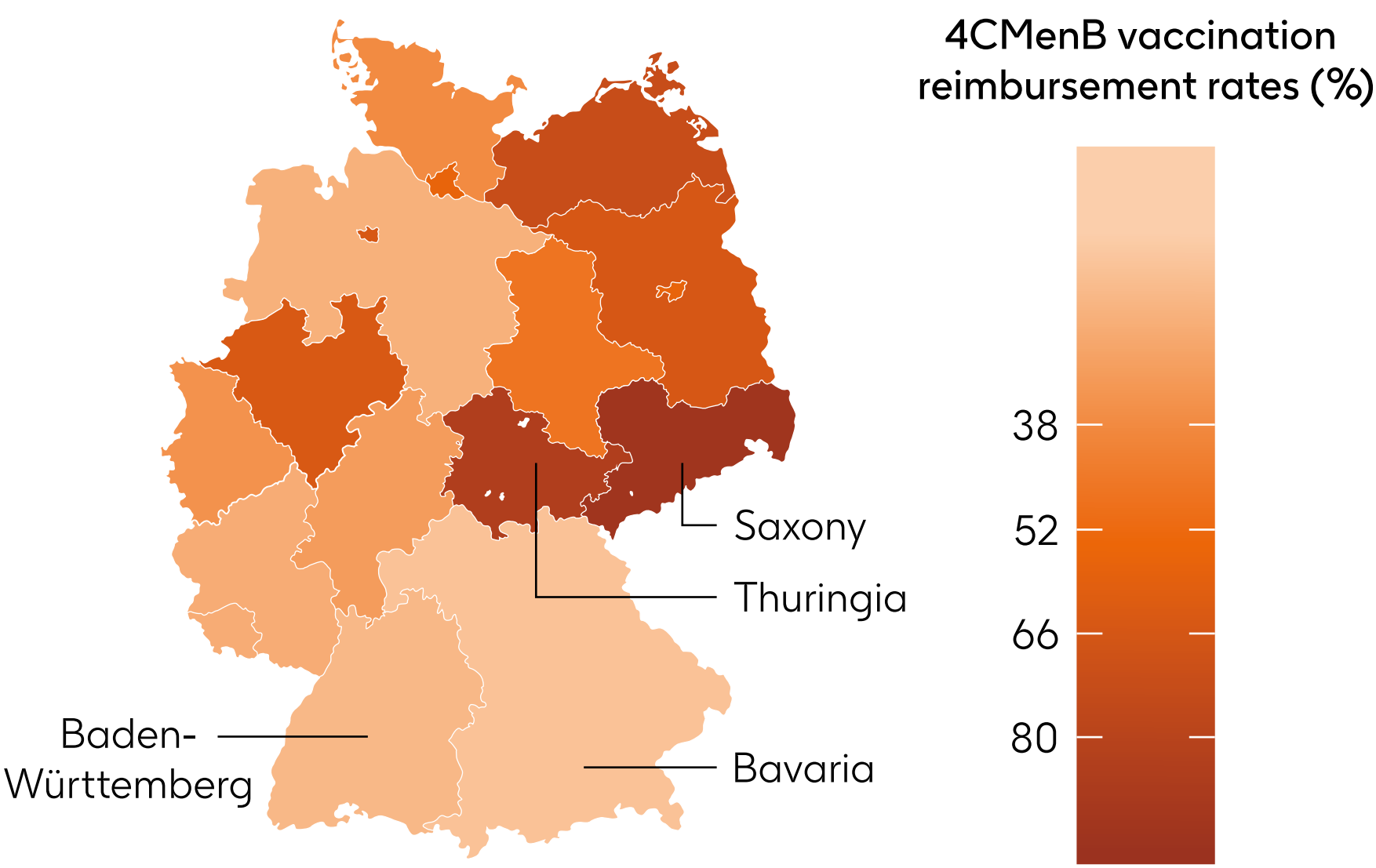


2022 infant 4CMenB vaccination rates (%)	
Overall	10.9
Regions	
Saxony	37.1
Mecklenburg-Vorpommern	23.6
Brandenburg	16.3
Thuringia	16.0
Saxony-Anhalt	13.7
Saarland	12.5
Berlin	11.2
Schleswig-Holstein	10.5
Lower Saxony	10.4
North Rhine	10.4
Rhineland-Palatinate	10.2
Westphalia-Lippe	9.2
Hesse	9.1
Bremen	8.7
Hamburg	8.5
Baden-Württemberg	7.5
Bavaria	6.9

Reimbursement rates

- Reimbursement rates in 2022 among those aged ≤1 year were highest in eastern Germany, such as Saxony and Thuringia (Figure 3)
- Lowest reimbursement rates were observed in Bavaria and Baden-Württemberg (Figure 3)

Figure 3: Proportion of infants (≤1 year) eligible for 4CMenB vaccination reimbursement across German regions in 2022

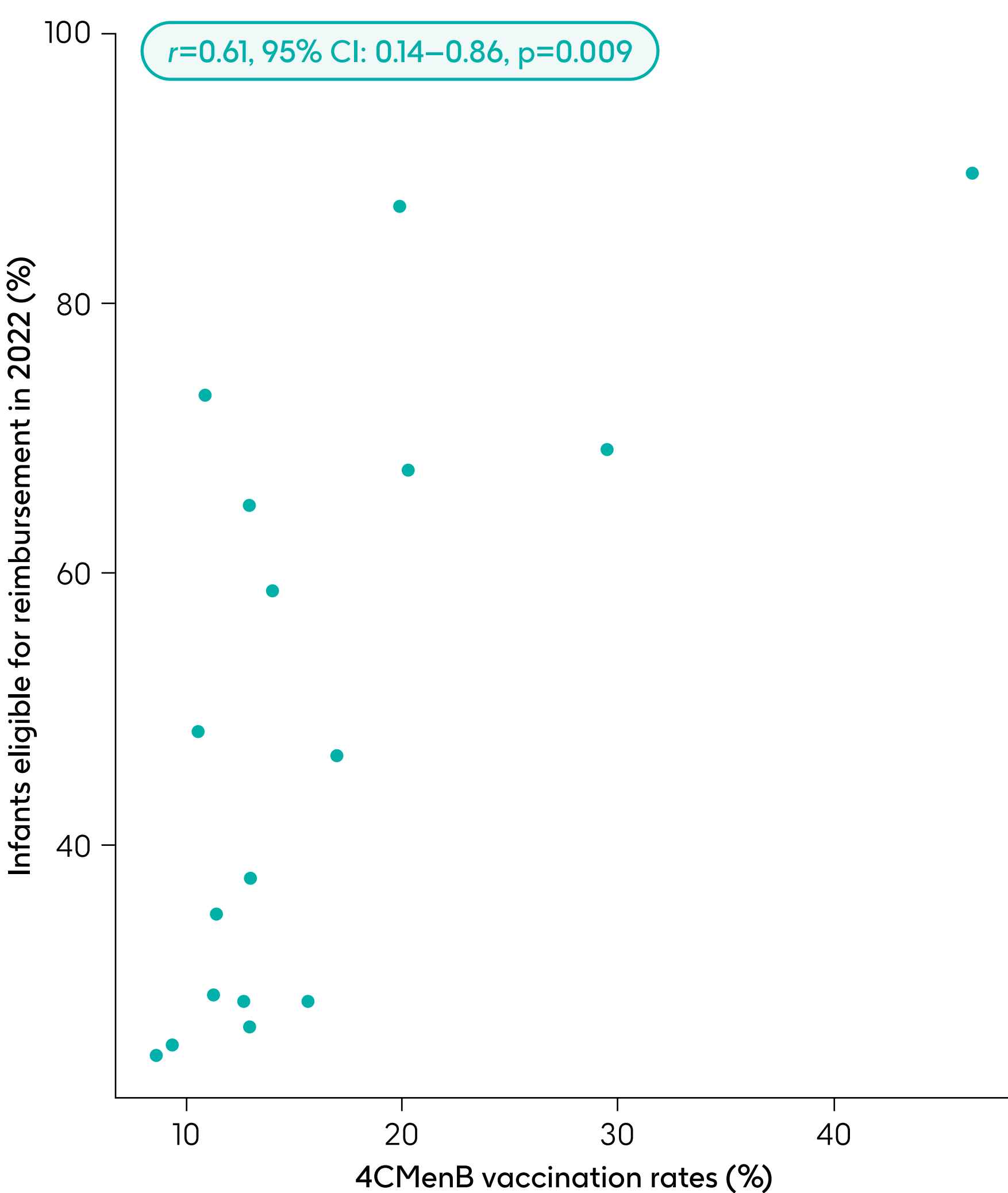


2022 infant reimbursement rates (%)	
Overall	41
Regions	
Saxony	90
Thuringia	87
Bremen	73
Mecklenburg-Vorpommern	69
Brandenburg	68
North Rhine	65
Berlin	59
Hamburg	48
Saxony-Anhalt	46
Schleswig-Holstein	37
Westphalia-Lippe	35
Hesse	29
Saarland	28
Rhineland-Palatinate	28
Lower Saxony	26
Baden-Württemberg	25
Bavaria	24

Correlation between vaccination rates and reimbursement rates

- A positive, statistically significant correlation was observed between 4CMenB vaccination rates and reimbursement rates at a regional level (Figure 4)

Figure 4: Correlation between 4CMenB vaccination rates and proportion of infants (≤1 year) eligible for vaccination reimbursement at a regional level in Germany in 2022



Correlation measured using Spearman's coefficient; Two-tailed p-value used. 4CMenB vaccination uptake from January 2022–December 2022; proportion of infants (≤1 year) eligible for vaccination reimbursement in 2022

Background

- Invasive meningococcal disease (IMD), caused by *Neisseria meningitidis*, can lead to severe health implications¹
- The 4CMenB vaccine was approved by the European Medicines Agency in 2013 for individuals aged ≥2 months²
- 4CMenB vaccination was introduced into the German national immunisation calendar in January 2024 and is recommended for children aged <5 years at a 2+1 dosing schedule³
- The effect of voluntary reimbursement by health insurers on 4CMenB vaccination rates in Germany, before the national recommendation, is unknown

Conclusions



Regional differences in reimbursement may lead to inequity in access to vaccination, as this study shows it was a driver of 4CMenB vaccination



Variation in 4CMenB vaccination rates suggest there may be high acceptance among patients, parents and healthcare professionals if reimbursement is provided



Regulation of reimbursement policies could help to avoid inequities in regional vaccination rates prior to national recommendations

Abbreviations

4CMenB, four-component meningococcal serogroup B; CI, confidence interval; IMD, invasive meningococcal disease

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Disclosures

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