

HEPATITIS B: DETECTION RATE AND VACCINATION COVERAGE IN BRAZIL IN 2016

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BACKGROUND

Approximately 257 million people are living with hepatitis B virus (HBV) infection worldwide. In Brazil, there have been 212,031 cases since 1999, with detection rates varying among the five regions in the country. Hepatitis B vaccine – the main form of HBV control – was implemented in 1998 in the whole country, gradually expanding to cover more age groups, and became universal in 2016. We aim to investigate the relationship between vaccination coverage and detection rates.

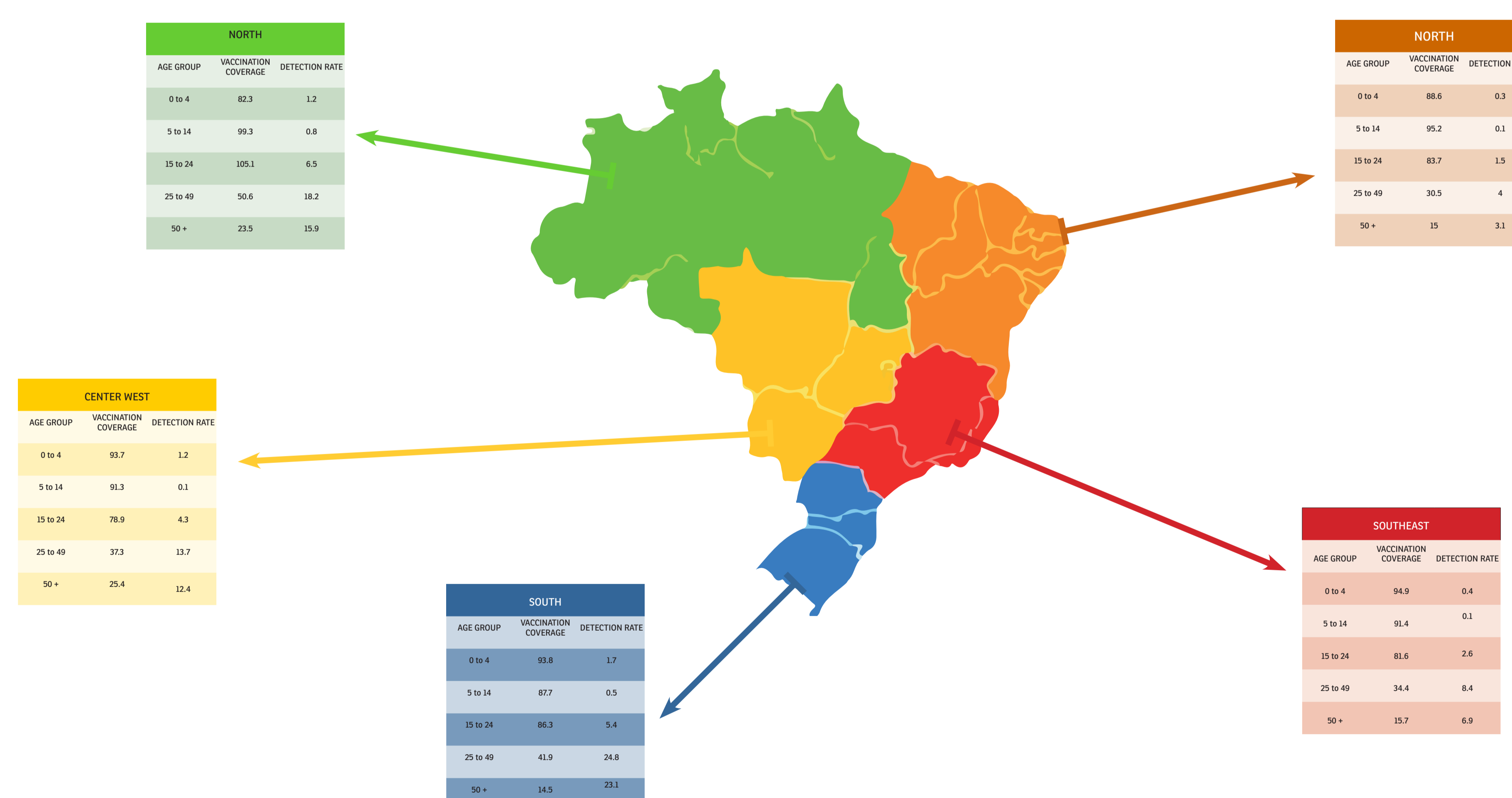
MATERIAL AND METHODS

We conducted a cross-sectional study of hepatitis B cases registered in Notifiable Diseases Information System in 2016 in Brazil. We calculated detection rates based on demographic data from the Ministry of Health's Informatics Department. Cumulative vaccination coverage data were obtained from the National Immunization Program. We applied Spearman rank correlation to evaluate the relationship between vaccination coverage and detection rates.

RESULTS

In 2016, 14,199 cases of hepatitis B were detected, with a detection rate of 6.9 (cases per 100,000 population); the cumulative vaccination coverage for the general population was 56.7%. In children aged ≤ 4 years and 5-14 years, coverage was over 82% and detection rate was below 1.8 in all regions. Among youngsters aged 15-24 years, the North region had the highest detection rate (6.5), though it also presented the highest vaccination coverage.

Among people aged 25-29 years, again the North region had the highest vaccination coverage (50.6%). However, the detection rate was the second largest (18.2) in Brazil. Among adults aged 50 years, coverage was below 26%, and the North region presented the highest detection rate (15.9), followed by the Southeast (14.5). With the exception of the North region, the correlations between vaccination coverage and detection rates were negative, with P-values < 0.05.



CONCLUSION

Findings indicate that low detection rates among younger people are associated to high vaccination coverage, while, especially among adults and the elderly, low vaccination coverage is related to high detection rates. However, there are differences among regions, and the North region of Brazil does not follow this trend. Estimated vaccination coverage is based on information related to administered doses, which is subject to mistakes in the registries. In addition, high detection rates may be due to the late diagnosis of this silent disease. It is necessary to keep the Viral Hepatitis Fighting Plan in Brazil's North region and to strengthen prevention measures in order to increase vaccination coverage mainly among adults and the elderly.