

# Determinants and Influence of Vaccine Hesitancy on Vaccine Recommendations among Healthcare Workers in the Kano Metropolis, Nigeria.

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Vaccine hesitancy among healthcare workers (HCWs) in the Kano metropolis is notably high for **COVID-19 (54.8%)**, **Hepatitis B (36.1%)**, and **Meningococcal vaccines (26.9%)**, which significantly affects their vaccine recommendations to patients, family, and friends.

## BACKGROUND

Vaccination is one of the greatest public health achievements, significantly reducing mortality and morbidity from infectious diseases. Despite this, vaccine hesitancy, defined as a delay or refusal to accept vaccines, remains a challenge, even among healthcare workers. This study investigates the factors driving vaccine hesitancy and its influence on the vaccination recommendations made by healthcare workers in Kano, Nigeria.

## METHODS

### Study Design:

- Cross-sectional study with mixed methods of data collection.

### Data Collection:

- 311 questionnaires were distributed 294 retrieved with 94.5% response rate).
- 6 in-depth interviews (IDIs) were conducted.

**Sampling:** Multi-stage (3) sampling technique.

### Analysis:

- Quantitative data were analysed using SPSS version 25.0.
- Qualitative data were analysed through framework analysis.

## RESULTS

### Prevalence of Vaccine Hesitancy:

- COVID-19: 54.8%
- Hepatitis B: 36.1%
- Meningococcal: 26.9%

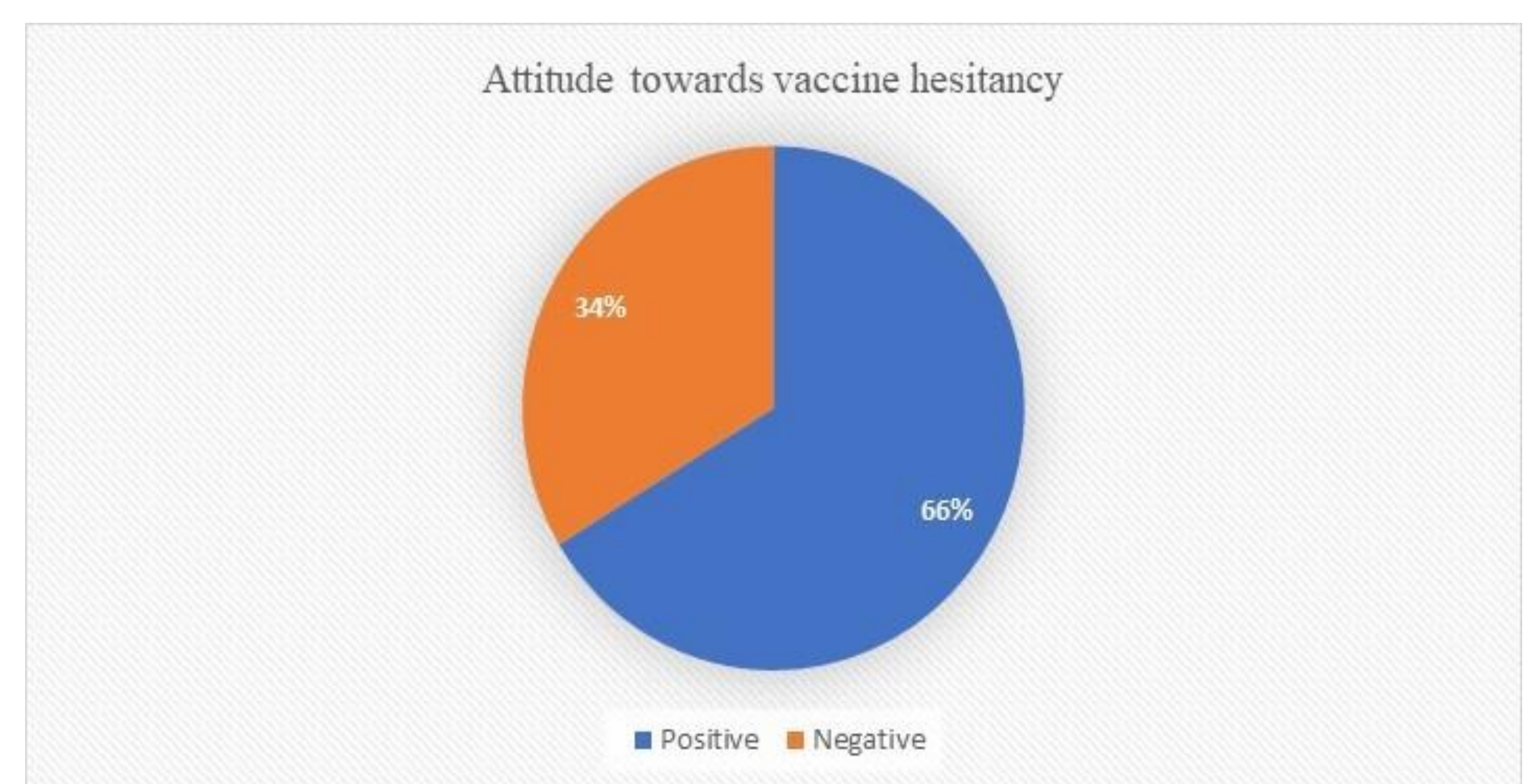
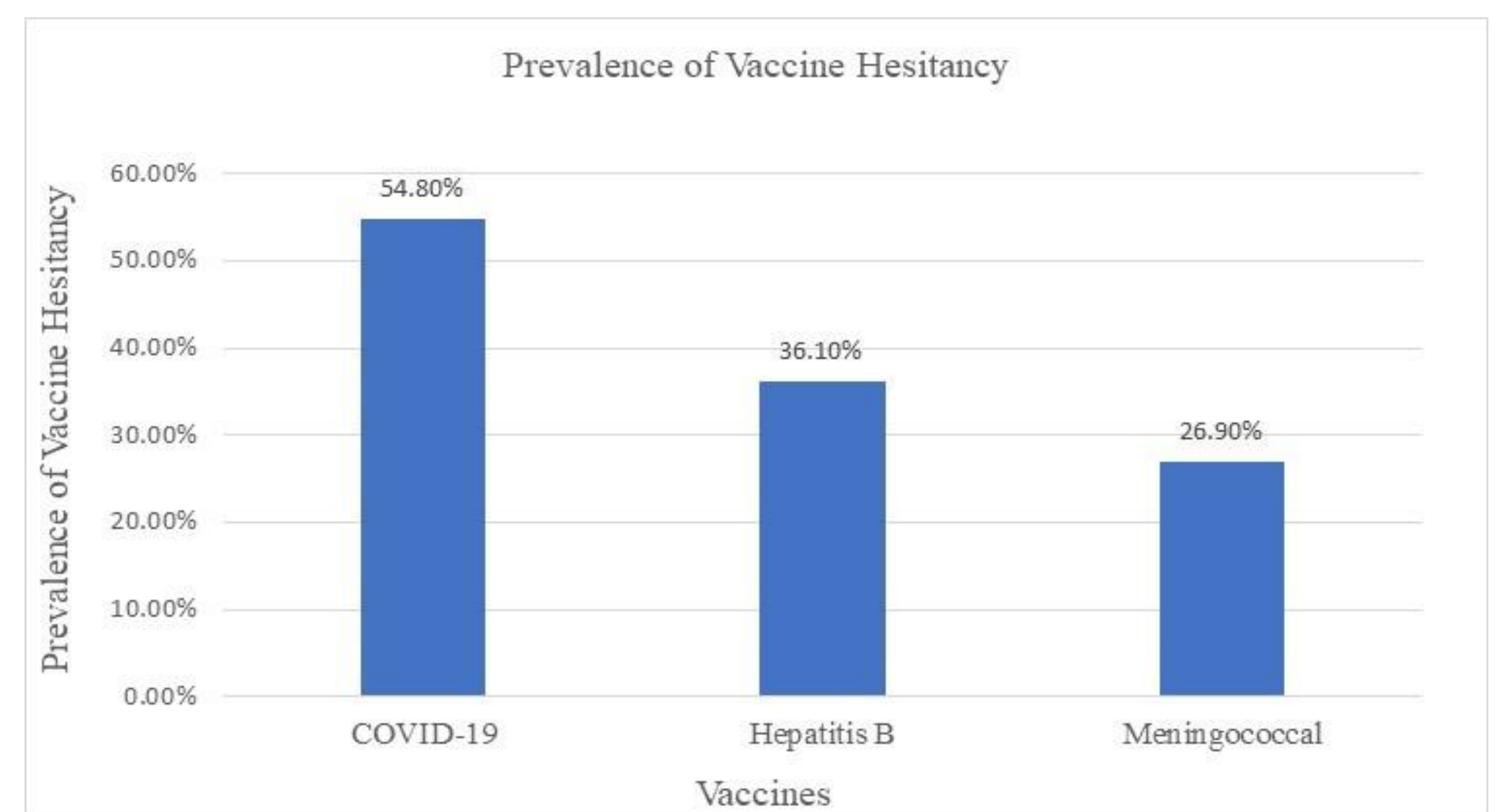
### Predictors of Vaccine Hesitancy:

- Unmarried status [aOR 3.18 (1.27 – 7.96)], polygamous setting [aOR 0.41 (0.22 – 0.78)], working in specialist/teaching hospitals [aOR 2.12 (1.01 – 4.45)], and earning above ₦300,000/month [aOR 0.45 (0.21 – 0.97)] were significant predictors.

### Attitudes toward Vaccine Hesitancy:

- Two-thirds had a positive attitude towards vaccines, but a significant third advised others to avoid vaccination.
- The only predictor of positive attitudes was working in a specialist/teaching hospital [aOR 2.34 (1.26 – 4.35)].
- The refusal to recommend vaccination was significantly associated with being female [aOR 1.90 (1.04 – 3.45)], and a non-doctor [aOR 3.41 (1.29 – 9.05)].

## RESULTS CONTINUED



## CONCLUSIONS

Vaccine hesitancy among healthcare workers in the Kano metropolis is concerning, especially given their role in influencing the vaccination decisions of others. The findings highlight the need for targeted interventions to address specific concerns and improve attitudes towards vaccination among different healthcare worker groups.

## ADDITIONAL KEY INFORMATION

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**Conflicts of Interest:** I declared no conflict of interest.

### Additional Resources:

- Figure 1: Prevalence of Vaccine Hesitancy among HCWs.
- Figure 2: Attitudes of HCWs towards Vaccine Hesitancy.

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