

**Methicillin-resistant *Staphylococcus aureus* (MRSA) prevalence among healthcare workers (HCW) in contact tracings in a Dutch teaching hospital, 2010-2018**

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**BACKGROUND:**  
In The Netherlands MRSA is still under control:

- Proportion MRSA blood isolates: 1,5%
- MRSA prevalence community: 0,13%

The national guideline on MRSA prevention and control advocate screening of HCW after unprotected contact to MRSA carriers. Although this strategy is successful, contact tracing of staff is time consuming and costly.

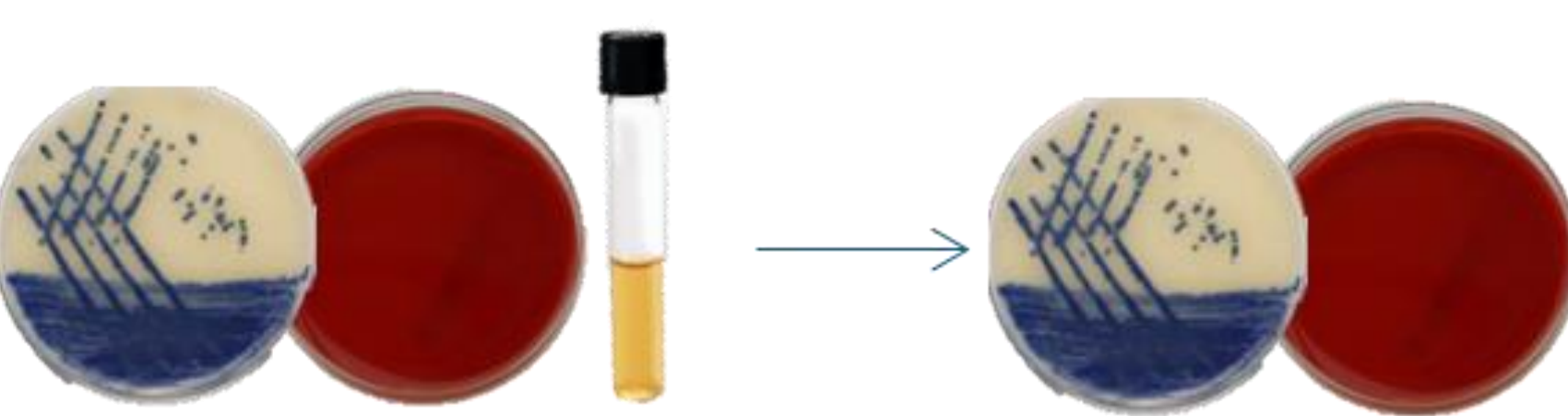
**OBJECTIVE:**  
We evaluated our contact tracing policy for HCW over the years 2010 - 2018

**SETTING:**  
Amphia hospital Breda, The Netherlands

- Teaching hospital
- 40,000 admissions per year
- Nosocomial transmission rarely observed

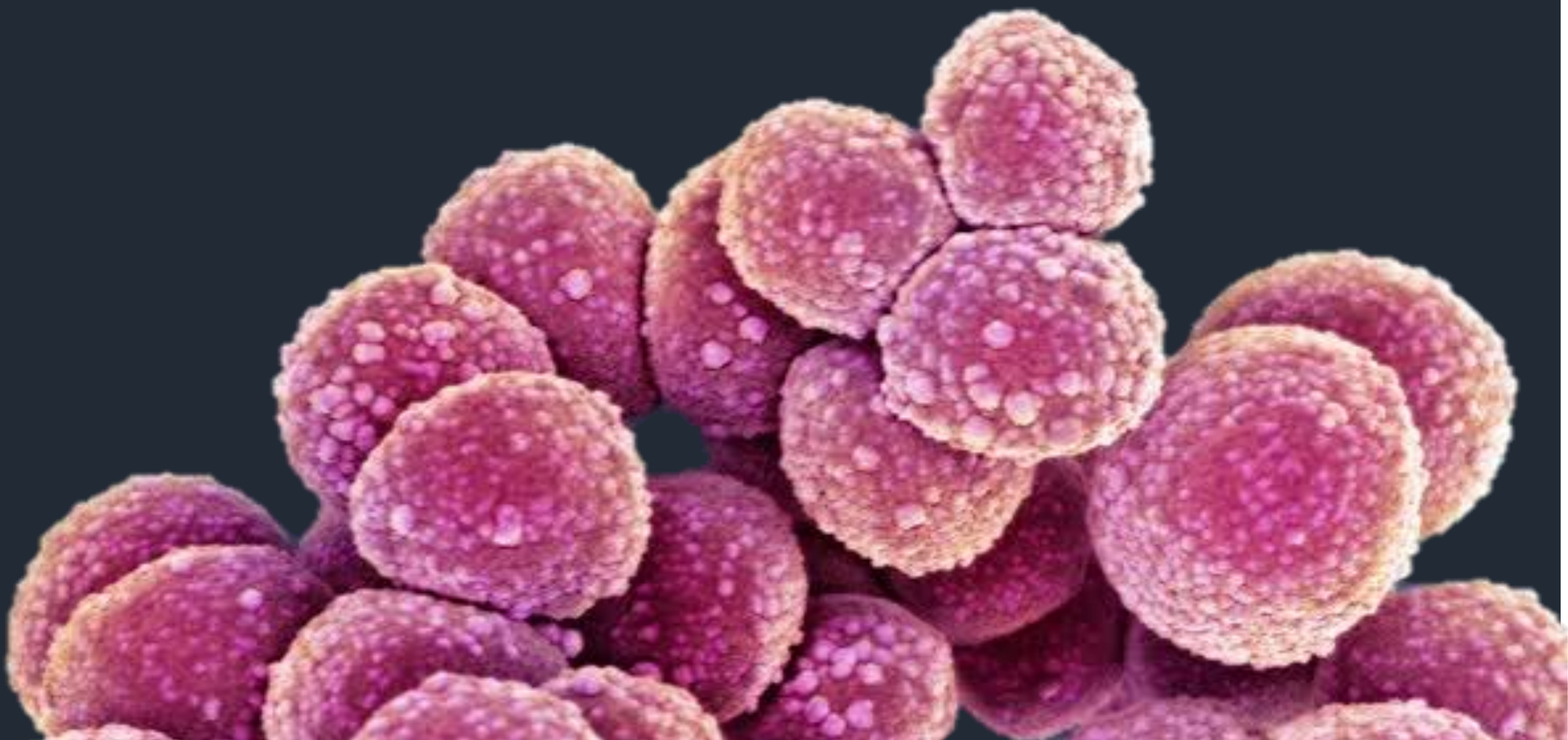
**METHODS**

- **Study:** retrospective, observational study
- **Subjects:** healthcare workers
- **Samples:** all samples of HCW from MRSA contact tracings
- **Period:** 2010 – 2018
- **Culture:** A pooled nose, throat and perineum swab



- **Typing:** Multiple loci VNTR analysis (MLVA)

# Minimal MRSA transmission to Dutch healthcare workers after unprotected contact with MRSA carrier.



**RESULTS**

- We included:
  - 287 contact tracings (range: 26 – 55 per year)
  - 8,849 samples (range: 677 – 1,448 per year)
- Thirty two HCWs were colonized with MRSA : 0.36% [95%CI 0.26 – 0.51]

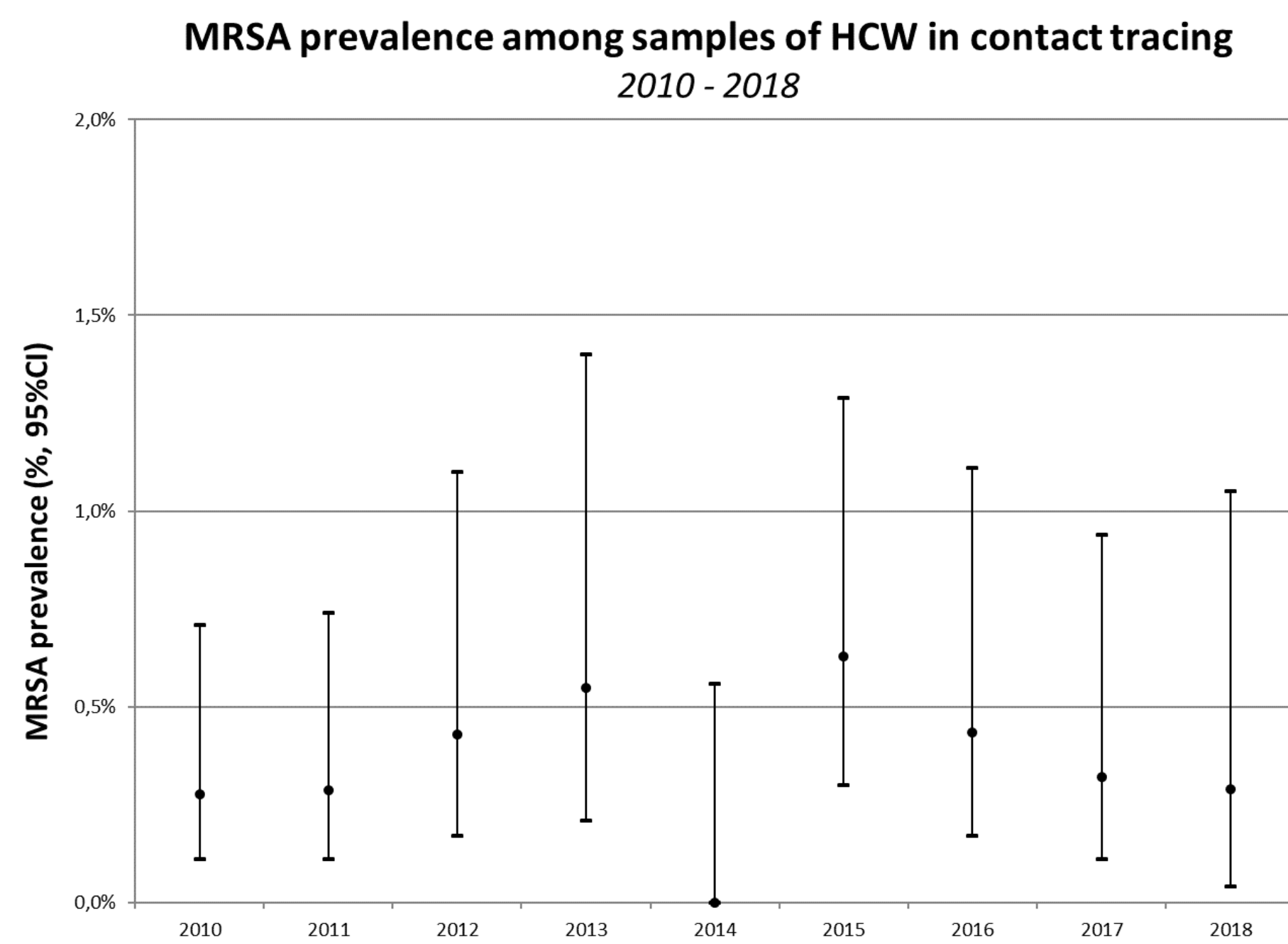


Figure 1 Prevalence of methicillin-resistant *Staphylococcus aureus* (MRSA) prevalence among samples of healthcare workers, between 2010 and 2018 with 95% confidence interval.

- In three cases it was clear that the HCW was the source of the outbreak and was the cause of invasive MRSA infections in patients.
- A different MLVA type as the index case was found in 24 / 32 HCW: 0,27%; [95%CI 0,18 – 0,40]

**CONCLUSION:**

- This study revealed a sustained low MRSA prevalence among samples in contact tracing of healthcare workers, over nine years.
- When MRSA contact tracing is performed according to the national guideline only 1 out 1000 samples results in a secondary case.
- These findings raise question marks regarding the efficacy of the current strategy to perform contact tracing after unprotected exposure.