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The staged roll-out of an MRSA intervention bundle in Singapore featuring universal active surveillance

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Introduction / objectives

Between 2004 and 2006, Singapore's 997 bed National University Hospital (NUH) had 62 hospital acquired MRSA bacteraemias/year. Another 200 inpatients/year had new non blood borne MRSA infections. Minimal active surveillance was undertaken.

Methods

Between 2006 and 2010, universal active surveillance (on admission and discharge), isolation/cohorting, data feedback loops and standardised hand hygiene (HH) audits were rolled out in a stepwise fashion across NUH. A comprehensive hand hygiene programme was institutionalised. MRSA acquisition was defined as having a positive exit swab yet negative entry and no known previous MRSA. Ward specific HH compliance and acquisition rates were fed back via public displays on each ward monthly.

Results

All adult medical and surgical wards had implemented the bundle by July 2010. In that month 3620 entry swabs were taken. Compliance rates with exit swabs are > 85%. MRSA acquisition fell from 10.1 to 3.1% and from 9.2 to 2.8% in our Intensive Care Units and general wards respectively. Nosocomial bacteraemia rates fell from 0.23 /1000 pt days in 2008 to 0.11 in 2010. The MRSA burden however remains high hospital wide and vancomycin use has not fallen.

Conclusion

The value of active surveillance remains controversial and near impossible to prove in a real life setting in the short term. A major reservoir continues to exist at NUH. A high baseline transmission rate may represent the initial identification of the reservoir of MRSA using an imperfect screening tool. Genuine success can only be acknowledged with a fall in infection rates, the total burden plus antibiotic useage. Acquisition rates are a useful interim tool but healthy scepticism is required during the collection of early data during major MRSA prevention programmes.

Disclosure of interest

None declared.

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