

# **Principles of health economic evaluation: Cost-effectiveness of universal rapid screening of MRSA**

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Despite increasing debate regarding strategies to control nosocomial MRSA infection, there are few formal economic evaluations of infection control programs. In particular, there are no published cost-effectiveness analyses of universal MRSA screening on admission, despite calls by some experts for more widespread implementation of this strategy.

We aim to develop a decision analytic model from the hospital administrator perspective to compare costs and effects of three control strategies: 1) universal rapid PCR screening; 2) screening for risk-factors (hospitalization or antibiotic use within the past 1 year) combined with pre-emptive isolation & contact precautions until results from confirmatory chromogenic agar are negative; and 3) no screening on admission.

Data were obtained from published literature and clinical trials at a Swiss teaching hospital, and included test turn-around-time & performance, MRSA cross-transmission, efficacy of isolation & contact precautions, and prevalence of colonization on admission. Cost data were derived from hospital accounting systems and included tests, laboratory & staff time, surgical bed-days, contact precautions, decolonization, and MRSA infection.

Preliminary results suggest that compared to risk-factor screening, universal rapid screening is not clearly cost-effective. We will discuss the framework of our analysis, preliminary results, and suggestions for further research.