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Use of face masks by non-scrubbed operating room staff: a randomized controlled trial

Joan Webster , Sarah Croger, Carolyn Lister, Michelle Doidge, Michael J. Terry, Ian JonesFirst published: 04 March 2010 | <https://doi.org/10.1111/j.1445-2197.2009.05200.x> | Citations: 26**J. Webster:** BA; **S. Croger** B Nurs; **C. Lister** B Nurs; **M. Doidge** B Nurs; **M. Terry** B Nurs; **I. Jones** ChM, FRANZCOG.[Read the full text >](#) PDF  TOOLS  SHARE

Abstract

Background: Ambiguity remains about the effectiveness of wearing surgical face masks. The purpose of this study was to assess the impact on surgical site infections (SSIs) when non-scrubbed operating room staff did not wear surgical face masks.

Methods: Eight hundred twenty-seven participants undergoing elective or emergency obstetric, gynecological, general, orthopaedic, breast or urological surgery in an Australian tertiary hospital were enrolled. Complete follow-up data were available for 811 patients (98.1%). Operating room lists were randomly allocated to a 'Mask group' (all non-scrubbed staff wore a mask) or 'No Mask group' (none of the non-scrubbed staff wore masks). The primary end point, SSI was identified using in-patient surveillance; post discharge follow-up and chart reviews. The patient was followed for up to six weeks.

Results: Overall, 83 (10.2%) surgical site infections were recorded; 46/401 (11.5%) in the Masked group and 37/410 (9.0%) in the No Mask group; odds ratio (OR) 0.77 (95% confidence interval (CI) 0.49 to 1.21), $p = 0.151$. Independent risk factors for surgical site infection included: any pre-operative stay (adjusted odds ratio [aOR], 0.43 (95% CI, 0.20; 0.95), high BMI aOR, 0.38 (95% CI, 0.17; 0.87), and any previous surgical site infection aOR, 0.40 (95% CI, 0.17; 0.89).

Conclusion: Surgical site infection rates did not increase when non-scrubbed operating room personnel did not wear a face mask.

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