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Bacillus subtilis application on decolonisation of ***Staphylococcus aureus***

Microbiome and probiotic studies have become increasingly popular in recent years, suggesting that more clinical trials examining the effectiveness of probiotics will be produced in the coming years. In response to the randomised clinical trial by Pipat Piewngam and colleagues,¹ we note the following points about the study.

The researchers chose to study the population of a rural area in Thailand. However, the microbiome population can vary on the basis of various factors, including the environment, lifestyle, diet, biomedical interventions, demographics, and geography of the individual.² This variation might be more pronounced in rural areas compared with urban areas where pathogenic *Staphylococcus aureus* colonisation is more common,^{3,4} potentially affecting the generalisability of the study.

Furthermore, the paper does not mention the assessment of compliance. It would be valuable to assess the participants' compliance in the study, because some individuals reported unpleasant tastes and other unwanted effects. Although probiotics have been reported to cause few to no side-effects, the possibility should not be underestimated, especially when administered to susceptible populations. Previous studies have reported side-effects such as an upset stomach and unusual stool.⁵ These issues could pose a notable problem for older or critically ill patients in real-world settings, and future studies should address the potential side-effects of probiotic administration.

Finally, the future applications of this probiotic should focus on higher risk groups, such as health-care workers, physicians, and patients in hospice care, who are all at a higher risk of severe infections, to assess its capability in controlling these pathobiomes.

We declare no competing interests.

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