

Appendix 1 PICO framework

Population (P)	Patients over 16 years old undergoing shoulder surgery [OR] healthy volunteers over 16 years old participating in studies related to evaluation of various pre-surgical shoulder surgery skin preparation methods (inclusive of pre-surgical home treatments and surgical skin preparations) around the world.
Intervention (I)	Evaluated skin preparation methods: pre-surgical home treatments used before admission, [AND/OR] surgical skin preparation used prior to shoulder surgery
Comparison (C)	Recommended skin preparation methods as per NICE, CDC and WHO: pre-surgical home treatment before admission, [AND/OR] surgical skin preparation used prior to shoulder surgery
Outcome (O)*	Reduction [OR] eradication of <i>C. acnes</i>
Studies (S)	Randomised Control Trials (RCT), Case Control studies, Cohort studies, Case series

*It is worth noting that for the outcome in the PICO approach, majority of studies report as Yes/No (qualitative result) to assess the success of a decolonisation method, although not so common, some also reported the reduction in *C. acnes* quantitatively as bacterial counts in CFU/mL.