

SELF-ASSESSMENT ON THE IMPLEMENTATION OF RECOMMENDATIONS OF THE PERIOPERATIVE PROCESS: INFECTIOUS RISK MANAGEMENT IN SURGERY SETTING

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Background and Importance

Effective management of infectious risks in surgical settings is crucial in reducing the occurrence of postoperative infections, which can result in higher morbidity and mortality rates, longer hospitalization periods, and escalated healthcare expenses. Implementing appropriate recommendations for infectious risk management requires a collaborative and multidisciplinary approach, involving the participation of surgeons, anesthesiologists, nurses, infection prevention and control specialists, as well as hospital administrators.

Aim and Objectives

The objective was twofold: to identify areas that require improvement and to assess compliance with established infection prevention and control guidelines. Regular assessments of recommended practices are crucial to ensure their effectiveness and identify areas for improvement. Continual monitoring and evaluation of the implementation of infectious risk management practices in surgical settings have the potential to improve patient outcomes significantly. By identifying and addressing areas that need improvement, hospitals can better safeguard patient health and prevent healthcare-associated infections.

Materials and Methods

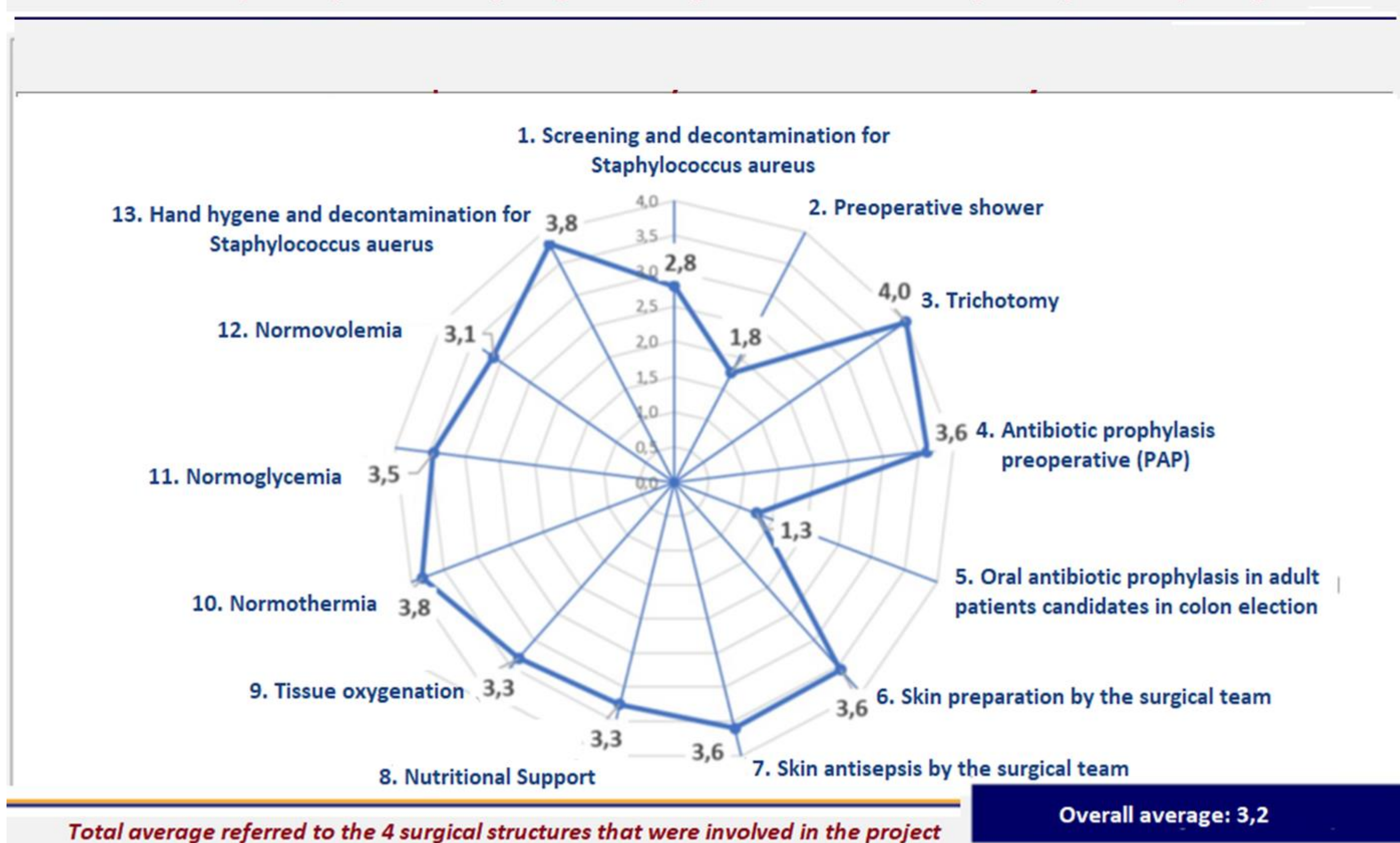
We utilized a comprehensive checklist of recommended infection prevention practices for perioperative care, as well as relevant hospital policies and procedures, and guidelines from the CDC and WHO. Our survey, conducted between July 2021 and March 2022, aimed to evaluate the knowledge and compliance of perioperative care staff regarding infection prevention practices across three different surgical areas: General and Emergency Surgery, Orthopedic Surgery, and Cardio Surgery Unit. The checklist comprised of 13 macro-requisites, with a score assigned to each requirement based on the number of improvement actions needed. A summary of the results was provided through a scored checklist that evaluated the level of recommendation implementation (score 0: not applicable; 1: no implementation; 2: ≤50%; 3: >50%; 4: 100% implementation) for each of the core components.

Results

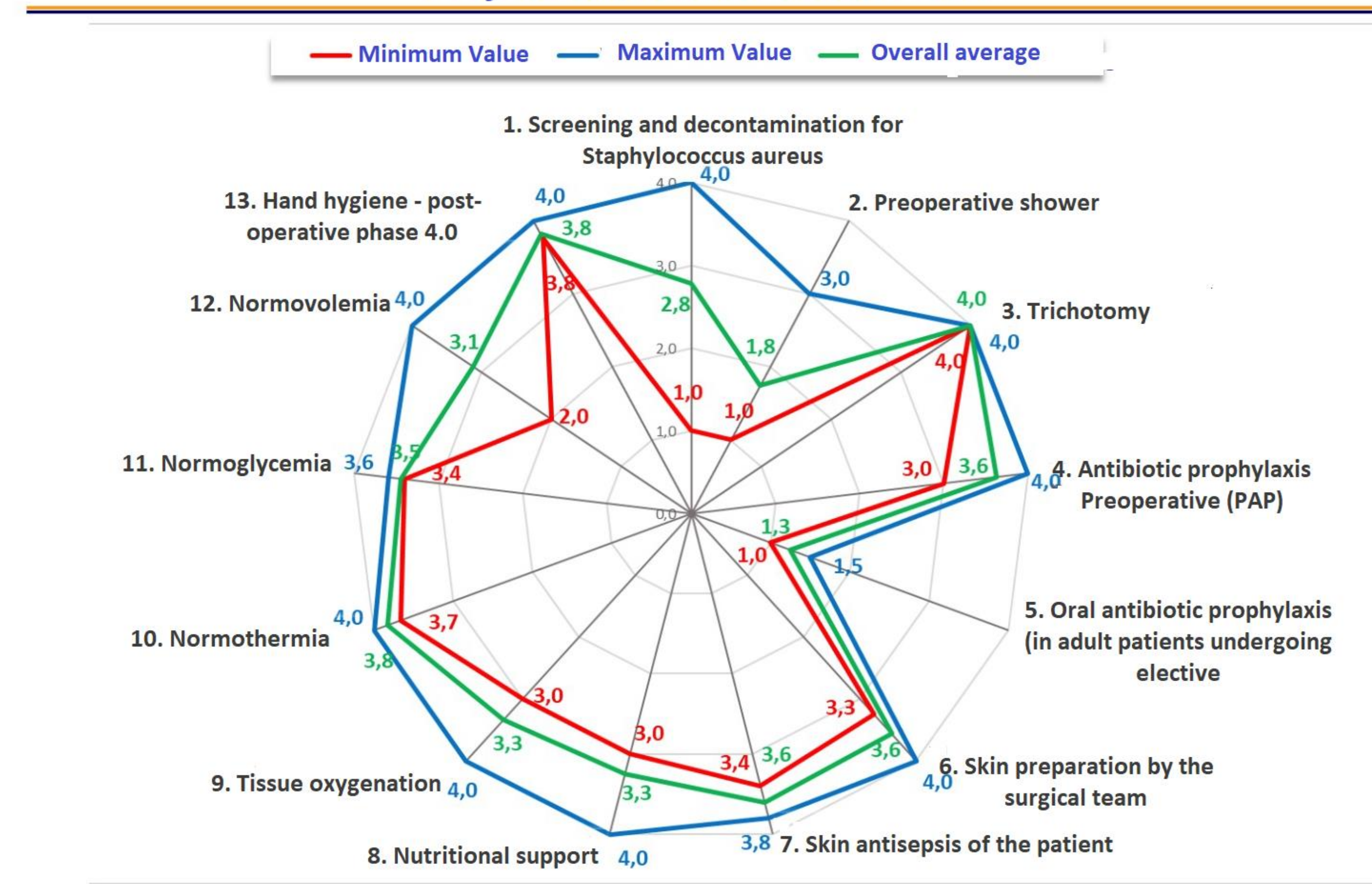
After conducting the assessment, a total of 31 improvement actions were identified. Upon comparing the results against the total average values, we observed that four macro requirements fell below the established threshold, which was an overall average of 3.2, as shown below. This indicates the need for targeted improvements in these areas to ensure compliance with recommended infection prevention and control guidelines. Taking corrective measures in these areas can lead to a significant improvement in patient outcomes and reduce the incidence of healthcare-associated infections.

The evaluation of the system components against recommended practices revealed that there were 8 improvement actions required in Emergency Surgery, 10 in Orthopedic Surgery, 6 in General Surgery, and 7 in Cardio Surgery. Additionally, some significant shortcomings were identified during the evaluation. For instance, the use of antimicrobial prophylaxis to prevent SSIs in colorectal surgery was scored at 1.3, indicating that it was not applicable. Similarly, screening for *S. Aureus* in Orthopedic Surgery scored only 1, indicating that there is a need for improvement in this area. By implementing recommended practices in these areas, healthcare providers can significantly enhance their infection prevention and control efforts.

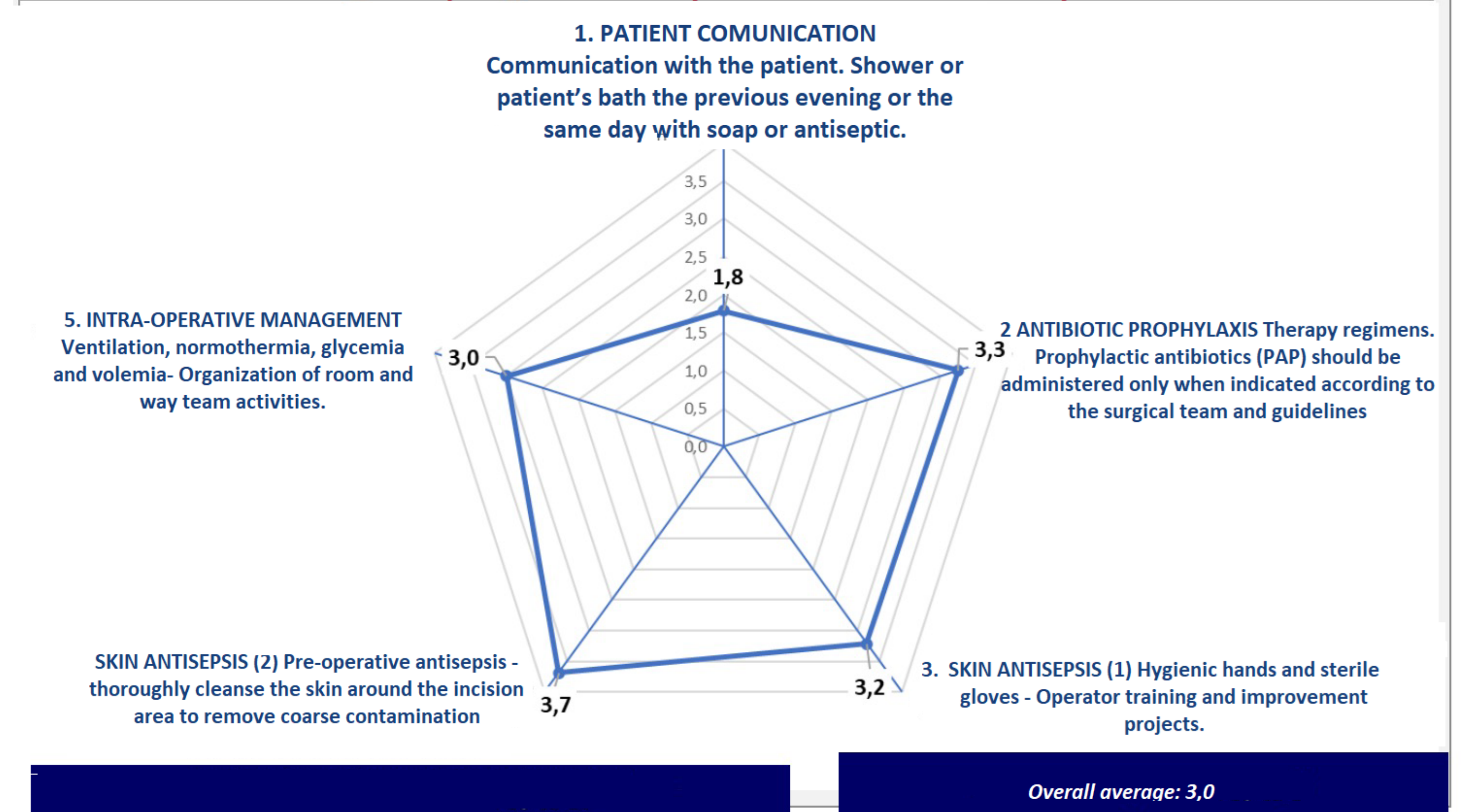
Recommendations for the prevention of surgical site infections: the technical fields of the Hospital of Perugia



Project outcomes: overall view



Perioperative recommendations for preventing surgical site infections: components of the system and human activity



Evaluation results in relation to technical equipment: improvement measures

The final assessment identified 31 areas for improvement, resulting in 13 general requirements

Evaluated elements	Average	nr. actions	%actions vs total	comparison to the total average of the values
1 Screening and decontamination for Staphylococcus aureus	2,8	3	10%	under threshold
2 Preoperative shower	1,8	3	10%	under threshold
3 Trichotomy	4,0	1	3%	above threshold
4 Antibiotics prophylaxis preoperative (PAP)	3,6	5	16%	above threshold
5 Oral antibiotic prophylaxis	1,3	2	6%	under threshold
6 Skin preparation by surgical team	3,6	0	0%	above threshold
7 Skin antisepsis of the surgical team	3,6	3	10%	above threshold
8 Nutritional support	3,3	3	10%	above threshold
9 Tissue oxygenation	3,3	1	3%	above threshold
10 Normothermia	3,8	4	13%	above threshold
11 Normoglycemia	3,5	4	13%	above threshold
12 Normovolemia	3,1	1	3%	under threshold
13 Hand hygiene post operative phase	3,8	1	3%	above threshold
Average values	3,2	31		

Conclusion

The assessment allowed the identification of the priority areas intervention, in order to set innovative strategic actions to improve safety in the perioperative process. In the future it will be possible to implement strategies with proven effectiveness and a global approach. The aim is to overcome and refining guidelines by providing a comprehensive range of evidence-based recommendations for the prevention of SSIs.

