

Topic	Research questions	Recommendations	Strength	Quality of evidence
<b>Preoperative measures</b>				
Antimicrobial skin sealants	Should antimicrobial sealants (in addition to standard surgical site skin preparation) be used in surgical patients for the prevention of SSI compared to standard surgical site skin preparation only?	The panel suggests that antimicrobial sealants should <b>not</b> be used after surgical site skin preparation for the purpose of reducing SSI.	Conditional	Very Low
Surgical hand preparation	<p>1. What is the most effective type of product for surgical hand preparation to prevent SSI?</p> <p>2. What is the most effective technique and ideal duration for surgical hand preparation?</p>	The panel recommends that surgical hand preparation should be performed by scrubbing with either a suitable antimicrobial soap and water or using a suitable alcohol-based handrub before donning sterile gloves.	Strong	Moderate
<b>Preoperative and/or intraoperative measures</b>				
Enhanced nutritional support	In surgical patients, should enhanced nutritional support be used for the prevention of SSI?	The panel suggests considering the administration of oral or enteral multiple nutrient-enhanced nutritional formulas for the purpose of preventing SSI in underweight patients who undergo major surgical operations.	Conditional	Very Low
Perioperative discontinuation of immunosuppressive agents	Should immunosuppressive agents be discontinued perioperatively and does this affect the incidence of SSI?	The panel suggests not to discontinue immunosuppressive medication prior to surgery for the purpose of preventing SSI.	Conditional	Very Low
Perioperative oxygenation	How safe and effective is the perioperative use of an increased fraction of inspired oxygen in reducing the risk of SSI?	The panel recommends that adult patients undergoing general anaesthesia with endotracheal intubation for surgical procedures should receive an 80% fraction of inspired oxygen intraoperatively and, if feasible, in the immediate postoperative period for 2-6 hours to reduce the risk of SSI.	Strong	Moderate

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Maintaining normal body temperature (normothermia)	Should systemic body warming vs. no warming be used for the prevention of SSI in surgical patients?	The panel suggests the use of warming devices in the OR and during the surgical procedure for patient body warming with the purpose of reducing SSI.	Conditional	Moderate
Use of protocols for intensive perioperative blood glucose control	1. Do protocols aiming to maintain optimal perioperative blood glucose levels reduce the risk of SSI? 2. What are the optimal perioperative glucose target levels in diabetic and non-diabetic patients?	The panel suggests the use of protocols for intensive perioperative blood glucose control for both diabetic and non-diabetic adult patients undergoing surgical procedures to reduce the risk of SSI.  The panel decided not to formulate a recommendation on this topic due to the lack of evidence to answer question 2.	Conditional	Low
Maintenance of adequate circulating volume control/ normovolemia	Does the use of specific fluid management strategies during surgery affect the incidence of SSI?	The panel suggests the use of goal-directed fluid therapy intraoperatively to reduce the risk of SSI.	Conditional	Low
Drapes and gowns	1. Is there a difference in SSI rates depending on the use of disposable non-woven drapes and gowns or reusable woven drapes and gowns? 1.1. Is there a difference in SSI rates depending on the use of disposable non-woven or reusable woven drapes? 1.2. Is there a difference in SSI rates depending on the use of disposable non-woven or reusable woven gowns? 2. Does the use of disposable, adhesive, incise drapes reduce the risk of SSI?	The panel suggests that either sterile, disposable non-woven or sterile, reusable woven drapes and gowns can be used during surgical operations for the purpose of preventing SSI.  No specific evidence was retrieved to answer to questions 1.1 and 1.2.  The panel suggests <b>not</b> to use plastic adhesive incise drapes with or without antimicrobial properties for the purpose of preventing SSI.	Conditional   Conditional	Moderate to very low   Low to very low

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Wound protector devices	Does the use of wound protector devices reduce the rate of SSI in open abdominal surgery?	The panel suggests considering the use of wound protector devices in clean-contaminated, contaminated and dirty abdominal surgical procedures for the purpose of reducing the rate of SSI.	Conditional	Very low
Incisional wound irrigation	Does intraoperative wound irrigation reduce the risk of SSI?	The panel considered that there is insufficient evidence to recommend for or against saline irrigation of incisional wounds before closure for the purpose of preventing SSI.	NA	NA
		The panel suggests considering the use of irrigation of the incisional wound with an aqueous PVP-I solution before closure for the purpose of preventing SSI, particularly in clean and clean-contaminated wounds.	Conditional	Low
		The panel suggests that antibiotic incisional wound irrigation should <b>not</b> be used for the purpose of preventing SSI.	Conditional	Low
Prophylactic negative pressure wound therapy	Does prophylactic negative pressure wound therapy reduce the rate of SSI compared to the use of conventional dressings?	The panel suggests the use of prophylactic negative pressure wound therapy in adult patients on primarily closed surgical incisions in high-risk wounds for the purpose of the prevention of SSI, while taking resources into account.	Conditional	Low
Use of surgical gloves	<ol style="list-style-type: none"> <li>When is double-gloving recommended?</li> <li>What are the criteria for changing gloves during an operation?</li> <li>What type of gloves should be used?</li> </ol>	The panel decided not to formulate a recommendation due to the lack of evidence to assess whether double-gloving or a change of gloves during the operation or the use of specific types of gloves are more effective in reducing the risk of SSI.	NA	NA

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Changing of surgical instruments	At the time of wound closure, is there a difference in SSI when instruments are changed for fascial, subcutaneous and skin closure using a new set of sterile instruments?	The panel decided not to formulate a recommendation on this topic due to the lack of evidence.	NA	NA
Antimicrobial-coated sutures	Are antimicrobial-coated sutures effective to prevent SSI? If yes, when and how should they be used?	The panel suggests the use of triclosan-coated sutures for the purpose of reducing the risk of SSI, independent of the type of surgery.	Conditional	Moderate
Laminar flow ventilation systems in the context of OR ventilation	1. Is the use of laminar air flow in the OR associated with the reduction of overall or deep SSI?	The panel suggests that laminar airflow ventilation systems should <b>not</b> be used to reduce the risk of SSI for patients undergoing total arthroplasty surgery.	Conditional	Low to very low
	2. Does the use of fans or cooling devices increase SSIs? 3. Is natural ventilation an acceptable alternative to mechanical ventilation?	The panel decided not to formulate a recommendation on these topics due to the lack of evidence to answer questions 2 and 3.	NA	NA
<b>Postoperative measures</b>				
SAP prolongation	Does continued postoperative SAP reduce the risk of SSI compared with preoperative and (if necessary) intraoperative prophylaxis only?	The panel recommends <b>against</b> the prolongation of SAP after completion of the operation for the purpose of preventing SSI.	Strong	Moderate
Advanced dressings	In surgical patients, should advanced dressings vs. standard sterile wound dressings be used for the prevention of SSI?	The panel suggests <b>not</b> using any type of advanced dressing over a standard dressing on primarily closed surgical wounds for the purpose of preventing SSI.	Conditional	Low
Antimicrobial prophylaxis in the presence of a drain and optimal timing for wound drain removal	1. In the presence of drains, does prolonged antibiotic prophylaxis prevent SSI?	The panel suggests that preoperative antibiotic prophylaxis should <b>not</b> be continued in the presence of a wound drain for the purpose of preventing SSI.	Conditional	Low
	2. When using drains, how long should they be kept in place to minimize SSI as a complication?	The panel suggests removing the wound drain when clinically indicated. No evidence was found to allow making a recommendation on the optimal timing of wound drain removal for the purpose of preventing SSI.	Conditional	Very low

SSI: surgical site infection; PICO: Population, Intervention, Comparison, Outcomes; CHG: chlorhexidine gluconate; SAP: surgical antibiotic prophylaxis; OR: operating room; ESBL: extended-spectrum beta-lactamase; PVP-I: povidone-iodine; NA: not applicable.