

Additional file 2

Table S2: Clinical interventions (SSI preventive measures) in the N=40 included studies

First author, year	Clinical interventions (SSI preventive measures)
Bull, 2011 [34]	<ul style="list-style-type: none"> - Normothermia - Oxygen delivery - Blood pressure monitoring - Diabetic control - Antibiotic prophylaxis
Cameron, 2015 [35]	<ul style="list-style-type: none"> - Antibiotic prophylaxis
Cima, 2013 [36]	<ul style="list-style-type: none"> - Patient cleansing - Antibiotic prophylaxis - Chloraprep (incisional area) - Closing tray - Glove change before closure - Hand hygiene - Dressing removal
Connolly, 2016 [37]	<ul style="list-style-type: none"> - Bowel preparation - Shower with chlorhexidine - Chlorhexidine antimicrobial scrub of abdomen - Glucose control - Hair removal - Surgical masks - Minimize traffic and the OR door "left open" time - Chlorhexidine skin prep, extended skin prep area - Hand hygiene - Clean scrubs - Antibiotic prophylaxis - Normothermia - Incision drape - Wound retractor - Before closing: re-glove, re-prep, re-towel incision area, use clean instrument tray - Wound closure technique - Dressing changes
Crolla, 2012 [38]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Hair removal - Normothermia - Discipline in the operating room
DeHaas, 2016 [39]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Preoperative warming - Hair removal - Chlorhexidine showers and wipes - Mechanical bowel preps - Normothermia - Chlorhexidine-alcohol surgical prep - Wound protectors - Clean closure trays - Gown and/or glove changes as appropriate - Redosing of antibiotics at appropriate time intervals - Dressing removal
Elia-Guedea, 2017 [40]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Restriction of staff transit in the operating room - Handling of wounds (dressings, gloves, surgical tools) - Wound care
Forbes, 2008 [41]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Normothermia - Glucose control
Frenette, 2016 [42]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Hair removal - Shower with chlorhexidine - Skin antisepsis - Operating room ventilation - Hand washing - Sterile clothing - Sterile operating room and equipment
Garcell, 2017 [43]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Antimicrobial consumption
Geubbels, 2004 [44]	<ul style="list-style-type: none"> - Antibiotic prophylaxis (Hospital E, abdominal surgery)
Grant, 2018 (Epub 2017) [45]	<ul style="list-style-type: none"> - Preoperative, intraoperative and postoperative process measures (Enhanced Recovery after Surgery for colorectal surgery program)
Hechenbleikner, 2015 [46]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Normothermia - Chlorhexidine washcloth - Skin preparation - Mechanical bowel preparation

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Hedrick, 2007 [47]	- Antibiotic prophylaxis - Normothermia - Glucose control
Hedrick, 2007 [48]	- Antibiotic prophylaxis - Normothermia - Glucose control
Hewitt, 2017 [49]	- Smoking cessation - Antibiotic prophylaxis - Chlorhexidine gluconate cloths (night before surgery) - Chlorhexidine gluconate cloths (day of surgery) - Normothermia - Hair removal - Skin preparation with Chlorhexidine - Glucose control - Oxygen delivery - Closing tray - Changing gowns, and gloves before fascia closure - Dressing down within 48 hours - Consultation for all ostomies and complex wounds
Kao, 2010 [50]	- Antibiotic prophylaxis
Keenan, 2014 [51]	- Chlorhexidine shower - Mechanical bowel preparation - Antibiotic prophylaxis - Preparation with chlorhexidine alcohol - Fascial wound protector - Dedicated wound closure tray - Limited OR traffic - Gown and glove change before fascial closure - Glucose control - Normothermia - Removal of sterile dressing within 48 h - Daily washings of incisions with chlorhexidine (postoperative) - Patient education
Keenan, 2015 [52]	- Mechanical bowel preparation - Chlorhexidine wipes - Antibiotic prophylaxis - Surgical field preparation - Limited OR traffic - Normothermia - Euglycemia - Wound protector - Gown and glove change prior closure - Closure trays - Dressing removal within 48 hours - Daily washing of incision with chlorhexidine (postoperative)
Kilan, 2017 [53]	- Antibiotic prophylaxis
Knox, 2016 [54]	- Antibiotic prophylaxis
Larochelle, 2011 [55]	- Antibiotic prophylaxis - Normothermia
Lavu, 2012 [56]	- Smoking cessation - Chlorhexidine-alcohol skin preparation (pre-admission) - Hair removal - Chlorhexidine-alcohol skin preparation - Antibiotic prophylaxis - Wound edge protection - Glycemic control - Temperature control - Gown and glove change prior closure
Liau, 2010 [57]	- Hair removal - Antibiotic prophylaxis - Glucose monitoring - Normothermia
Losh, 2017 [58]	- Smoking cessation - Diabetic Screening - Antibiotic bowel preparation - Chlorhexidine wipes (Patient) - Chlorhexidine - Antibiotic prophylaxis - Normothermia - Glucose control - Hair removal - Glove change - New instrument tray - Wound protector - Wound irrigation

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Lutfiyya, 2012 [59]	<ul style="list-style-type: none"> - Smoking cessation - Antiseptic skin cleansing (chlorhexidine wipes, night before and morning of surgery) - Mechanical colon preparation - Antibiotic prophylaxis - Diabetic Screening - Glucose control - Hair removal - Normothermia - skin preparation with chlorhexidine gluconate - oxygen delivery - double gloving - pulse lavage of subcutaneous tissues (open operations) - Protect primary-closure incisions with dressing for 5 days
Mammo, 2016 [60]	<ul style="list-style-type: none"> - Mechanical bowel preparation - Antibiotic prophylaxis - Heparin prophylaxis - Normothermia
Misteli, 2012 [61]	<ul style="list-style-type: none"> - Antibiotic prophylaxis
Nordin, 2018 (Epub 2017) [62]	<ul style="list-style-type: none"> - Bowel preparation - Abdomen cleansing (wipes, Patient) - Normothermia - Antibiotic prophylaxis - Skin Prep with chlorhexidine or 10% povidone-iodine - Glove change before closure - Redrape surgical field - Remove dirty instruments before closure - Clean instruments for closure
Pastor, 2010 [63]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Hair removal - Glucose control - Normothermia
Pérez-Blanco, 2015 [64]	<ul style="list-style-type: none"> - shower with chlorhexidine - Glycaemic control - Antibiotic Prophylaxis - Normothermia - Glove change - Surgical wound dressing/cleansing
Reames, 2015 [65]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Glucose control - Hair removal - Normothermia
Tanner, 2016 [66]	<ul style="list-style-type: none"> - Screening and decolonisation for MRSA - Showering with soap - Hair removal - Antibiotic prophylaxis - Skin preparation with chlorhexidine - Normothermia - Antiseptic impregnated incise drapes - Supplemental oxygen - Glucose control
Tillman, 2013 [67]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Normothermia - Hair removal
Vogel, 2010 [68]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Wound closure/irrigation
Vu, 2018 (Epub 2017) [69]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Mechanical bowel preparation - Normoglycemia
Waters, 2017 [70]	<ul style="list-style-type: none"> - Antibiotic prophylaxis (venous thromboembolism prophylaxis, urinary catheter removal)
Wick, 2012 [71]	<ul style="list-style-type: none"> - Skin preparation - Chlorhexidine wash cloths - Normothermia - Sterile techniques (instruments, gloves) - Antibiotic prophylaxis
Wick, 2015 [72]	<ul style="list-style-type: none"> - Smoking cessation - Mechanical bowel preparation - Chlorhexidine bathing - Normothermia - Antibiotic prophylaxis
Willis, 2016 [73]	<ul style="list-style-type: none"> - Antibiotic prophylaxis - Local irrigation - Drains