

Supplementary Table 1 Complete database search						
PubMed	Cochrane	Embase	Google Scholar	Clinicaltrials.gov	Wiley	Web of Science

{[surgical skin preparation (Other Term)	("surgical skin	("surgical skin	orthopedics	(surgical skin	(surgical skin	TI = [{"surgical
OR surgical skin prep (Title/Abstract)	preparation" OR	preparation":	effectiveness	preparation OR	preparation OR	skin preparation"
OR skin antisepsis (Title/Abstract) OR	"surgical skin prep"	ti,ab,kw OR	"extremity" OR	surgical skin prep	surgical skin	OR "surgical skin
surgical preparation solutions	OR "skin antisepsis"	"surgical skin	"fixation" OR	OR skin antisepsis	prep OR skin	prep" OR "skin
(Title/Abstract) OR surgical preparation	OR "surgical	prep": ti,ab,kw OR	"surgical	site OR	surgical antisepsis	OR antisepsis" OR
solution (Title/Abstract) OR surgical	preparation solutions"	"skin antisepsis":	infection" OR	preparation	surgical	"surgical
prep solution (Title/Abstract) OR	OR "surgical	ti,ab,kw OR	"efficacy" OR	solutions OR	preparation	preparation
surgical prep solutions (Title/Abstract)	preparation solution"	"surgical	"iodine" OR	surgical preparation	solutions OR	solutions" OR
OR ChloraPrep (Title/Abstract) OR	OR "surgical prep	preparation	"chlorhexadine"	solution OR surgical	surgical	"surgical
DuraPrep (Title/Abstract) OR	solution" OR "surgical	solutions": ti,ab,kw	infection OR "skin	prep solution OR	preparation	preparation
chlorhexidine gluconate (Title/Abstract)	prep solutions" OR	OR "surgical	preparation" OR	surgical prep	solution OR	solution" OR
OR chlorhexidine (Title/Abstract) OR	"ChlorPrep" OR	preparation	"orthopedic	solutions OR	surgical prep	"surgical prep
isopropyl alcohol (Title/Abstract) OR	"DuraPrep" OR	solution": ti,ab,kw	surgery" "skin	ChlorPrep OR	solution OR	solution" OR
iodophor (Title/Abstract) OR povidone-	"chlorhexidine	OR "surgical prep	prep" - abdominal	DuraPrep OR	surgical prep	"surgical prep
iodine scrub (Title/Abstract) OR iodine	gluconate" OR	solution": ti,ab,kw	review	chlorhexidine	solutions OR	solutions" OR
paint (Title/Abstract) OR iodine scrub	"chlorhexidine" OR	OR "surgical prep		gluconate OR	ChlorPrep OR	"ChlorPrep" OR
(Title/Abstract) OR paint	"isopropyl alcohol" OR	solutions": ti,ab,kw		chlorhexidine OR	DuraPrep OR	"DuraPrep" OR
(Title/Abstract) OR CHG	"iodophor" OR	OR "chloraprep":		isopropyl alcohol OR	chlorhexidine	"chlorhexidine
(Title/Abstract)] AND [orthopedics	"povidone-iodine	ti,ab,kw OR		iodophor OR	gluconate OR	gluconate" OR
(MeSH Terms) OR orthopedic surgery	scrub" OR "odine	"duraprep":		povidone-iodine	chlorhexidine	"chlorhexidine"

(Title/ Abstract) OR orthopaedic surgery	paint” OR “iodine	ti,ab,kw	OR	scrub OR iodine OR isopropyl OR “isopropyl
(Title/ Abstract) OR foot (Title/ Abstract)	scrub” OR “paint” OR “chlorhexidine			paint OR iodine alcohol OR alcohol” OR
OR ankle (Title/ Abstract) OR lower	“CHG”):ti,ab,kw AND	gluconate”:		scrub OR paint OR iodophor OR “iodophor” OR
extremity (Title/ Abstract) OR knee	(“orthopedics” OR	ti,ab,kw	OR	CHG) AND povidone-iodine “povidone-iodine
(Title/ Abstract) OR hip (Title/ Abstract)	“orthopedic surgery”	“chlorhexidine”:		(orthopedics OR scrub OR iodine scrub” OR “iodine
OR pelvis (Title/ Abstract) OR spine	OR “orthopaedic	ti,ab,kw	OR	orthopedic surgery paint OR iodine paint” OR “iodine
(Title/ Abstract) OR shoulder	surgery” OR “foot” OR	'isopropyl alcohol”:		OR orthopaedic scrub OR paint scrub” OR “paint”
(Title/ Abstract) OR elbow	“ankle” OR “lower	ti,ab,kw	OR	surgery OR foot OR OR CHG) AND OR “CHG”) AND
(Title/ Abstract) OR arm (Title/ Abstract)	extremity” OR “knee	“iodophor”:		ankle OR lower (orthopedics OR (“orthopedics” OR
OR forearm (Title/ Abstract) OR wrist	OR “hip” OR “pelvis”	ti,ab,kw	OR	extremity OR knee orthopedic “orthopedic
(Title/ Abstract) OR hand	OR “spine” OR	“povidone-iodine		OR hip OR pelvis OR surgery OR surgery” OR
(Title/ Abstract) OR upper	“shoulder” OR	scrub”: ti,ab,kw OR		spine OR shoulder orthopaedic “orthopaedic
extremity(Title/ Abstract)	OR “elbow” OR “arm” OR	“iodine paint”:		OR elbow OR arm surgery OR foot surgery” OR
arthroplasty(Title/ Abstract)	OR “forearm” OR “wrist”	ti,ab,kw OR 'iodine		OR forearm OR wrist OR ankle OR “foot” OR “ankle”
extremity (Title/ Abstract) OR fixation of	OR “hand” OR “upper	scrub':ti,ab,kw OR		OR hand OR upper lower extremity OR “lower
extremity (Title/ Abstract)] AND	extremity” OR	“paint”: ti,ab,kw		extremity OR OR knee OR hip extremity” OR
[surgical site (Title/ Abstract) OR	“arthroplasty” OR	OR “chg”: ti,ab,kw)		arthroplasty OR OR pelvis OR “knee” OR “hip”
surgical location (Title/ Abstract) OR	“extremity” OR	AND		extremity OR spine OR OR “pelvis” OR
surgical field (Title/ Abstract) OR	“fixation of	(“orthopedics”:		fixation of extremity) shoulder OR “spine” OR
surgical operation (Title/ Abstract) OR	extremity”):ti,ab,kw	ti,ab,kw	OR	AND (surgical site elbow OR arm “shoulder” OR

surgical site infection (Title/Abstract)	AND ("surgical site" "orthopedic	OR surgical location	OR forearm	OR "elbow" OR "arm"
OR surgical site infections (Title/Abstract)	OR "surgical location" surgery": ti,ab,kw	OR surgical field	OR wrist	OR hand
OR deep surgical infections (Title/Abstract)	OR "surgical field" OR	surgical operation	OR upper	OR "forearm" OR
surgical infections (Title/Abstract)	"surgical operation" surgery": ti,ab,kw	OR surgical site	extremity	OR "hand" OR "upper
surgery (Title/Abstract)	OR "surgical site	infection OR surgical	arthroplasty	OR extremity" OR
site (Title/Abstract)	infection" OR "surgical	site infections	OR extremity	OR "arthroplasty" OR
complications (Title/Abstract)	OR "ankle": ti,ab,kw	deep surgical	fixation	OR "extremity" OR
OR outcomes (Title/Abstract)	site infections" OR	infections	OR extremity)	AND "fixation
OR clinical outcomes (Title/Abstract)	"deep surgical extremity": ti,ab,kw	OR surgical infections	(surgical site	OR extremity")
OR functional outcomes (Title/Abstract)	infections" OR	OR surgery site	surgical location	("surgical site" OR
OR side effects (Title/Abstract)	"surgical infections" OR	complications	OR OR surgical field	"surgical location"
OR surgery site (Title/Abstract)	OR "surgery site	outcomes	OR clinical	OR "surgical field"
OR efficacy (Title/Abstract)	complications" OR	OR outcomes	OR operation	OR OR "surgical
OR effectiveness (Title/Abstract)	"outcomes" OR	"spine": ti,ab,kw	surgical site	operation" OR
OR effect (Title/Abstract)	"clinical outcomes" OR	OR "shoulder": ti,ab,kw	OR side effects	OR infection
OR surgical fixation (Title/Abstract)	"functional outcomes" OR	OR "elbow": ti,ab,kw	OR surgical site	OR "surgical site
OR [editorial (Publication Type)	OR "side effects" OR	OR "arm": ti,ab,kw	efficacy	OR infections
OR letter (Publication Type)	"surgery site" OR	OR "forearm": ti,ab,kw	effectiveness	OR "surgical site
OR Review (Publication Type)	"efficacy" OR	OR "wrist": ti,ab,kw	effect OR surgical	infections" OR
OR Comment (Publication Type)]}	"effectiveness" OR	OR "wrist": ti,ab,kw	fixation)	surgical infections" OR

“effect” OR “surgical	OR	“hand”:	infections	OR	“surgical
fixation”):ti,ab,kw”	ti,ab,kw	OR “upper	surgery	site	infections”
	extremity”: ti,ab,kw		complications	“surgery	site
	OR “arthroplasty”:		OR outcomes	OR	complications”
	ti,ab,kw	OR	clinical outcomes	“outcomes”	OR
	“extremity”:		OR functional	“clinical	
	ti,ab,kw	OR	outcomes	OR	outcomes”
	“fixation of		side effects	OR	“functional
	extremity”:		surgery site	OR	outcomes”
	ti,ab,kw)	AND	efficacy	OR	“side effects”
	(“surgical site”:		effectiveness	OR	“surgery site”
	ti,ab,kw	OR	effect	OR	“efficacy”
	“surgical location”:		surgical fixation)	“effectiveness”	OR
	ti,ab,kw	OR	AND (Journals)	“effect”	OR
	“surgical field”:			“surgical	
	ti,ab,kw	OR		fixation”)]	OR AB
	“surgical			= [(“surgical skin	
	operation”: ti,ab,kw			preparation”	OR
	OR “surgical site			“surgical skin	
	infection”: ti,ab,kw			prep”	OR “skin

OR “surgical site infections”: ti,ab,kw	antiseptics” OR
OR “deep surgical infections”: ti,ab,kw	“surgical preparation solutions” OR
OR “surgical infections”: ti,ab,kw	“surgical preparation solution” OR
OR “surgery site complications”: ti,ab,kw OR	“surgical prep solution” OR
“outcomes”: ti,ab,kw OR	“surgical prep solutions” OR
“clinical outcomes”: ti,ab,kw OR	“ChlorPrep” OR
“functional outcomes”: ti,ab,kw	“DuraPrep” OR
OR “side effects”: ti,ab,kw OR	“chlorhexidine gluconate” OR
“surgery site”: ti,ab,kw OR	“chlorhexidine” OR
“efficacy”: ti,ab,kw	OR “isopropyl alcohol” OR
	“iodophor” OR
	“povidone-iodine

OR “effectiveness”: ti,ab,kw OR “effect”: ti,ab,kw OR “surgical fixation”: ti,ab,kw)AND “article”/it	scrub” OR “iodine paint” OR “iodine scrub” OR “paint” OR “CHG”) AND (“orthopedics” OR “orthopedic surgery” OR “orthopaedic surgery” OR “foot” OR “ankle” OR “lower extremity” OR “knee” OR “hip” OR “pelvis” OR “spine” OR “shoulder” OR “elbow” OR “arm” OR “forearm” OR “wrist” OR “hand” OR “upper
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	extremity”	OR
	“arthroplasty”	OR
	“extremity”	OR
	“fixation	of
	extremity”) AND	
	(“surgical site” OR	
	“surgical location”	
	OR “surgical field”	
	OR “surgical	
	operation”	OR
	“surgical	site
	infection”	OR
	“surgical	site
	infections”	OR
	“deep surgical	
	infections”	OR
	“surgical	
	infections”	OR
	“surgery	site
	complications”	OR

	“outcomes”	OR
	“clinical	
	outcomes”	OR
	“functional	
	outcomes”	OR
	“side effects”	OR
	“surgery site”	OR
	“efficacy”	OR
	“effectiveness”	OR
	“effect”	OR
	“surgical	
	fixation”)]	OR AK
	= [(“surgical skin	
	preparation”	OR
	“surgical skin	
	prep”	OR “skin
	antisepsis”	OR
	“surgical	
	preparation	
	solutions”	OR

“surgical
preparation
solution” OR
“surgical prep
solution” OR
“surgical prep
solutions” OR
“ChloraPrep” OR
“DuraPrep” OR
“chlorhexidine
gluconate” OR
“chlorhexidine”
OR “isopropyl
alcohol” OR
“iodophor” OR
“povidone-iodine
scrub” OR “iodine
paint” OR “iodine
scrub” OR “paint”
OR “CHG”) AND

	(“orthopedics” OR “orthopedic surgery” OR “orthopaedic surgery” OR “foot” OR “ankle” OR “lower extremity” OR “knee” OR “hip” OR “pelvis” OR “spine” OR “shoulder” OR “elbow” OR “arm” OR “forearm” OR “wrist” OR “hand” OR “upper extremity” OR “arthroplasty” OR “extremity” OR “fixation of
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	extremity”) AND (“surgical site” OR “surgical location” OR “surgical field” OR “surgical operation” OR “surgical site infection” OR “surgical site infections” OR “deep surgical infections” OR “surgical infections” OR “surgery site complications” OR “outcomes” OR “clinical outcomes” OR “functional
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	outcomes”	OR
	“side effects”	OR
	“surgery site”	OR
	“efficacy”	OR
	“effectiveness”	OR
	“effect”	OR
	“surgical	
	fixation”)]	AND
	(Articles)	