APPENDIX A: Antibioprophylaxis in surgery and interventional medicine (adult patients). Update 2017[257]

These guidelines are based on guidelines released by the French Society of Anesthesia and Intensive Care Medicine (SFAR). Local practices may differ from these guidelines.

Table I: Neurosurgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
CSF shunt	Cefazolin	2 g slow IVI	Single dose 1 g IVI if surgery > 4 h
	If allergic: Vancomycin[a]	30 mg/kg slowly IVI over 120 min	Single dose
External CSF shunt	No antibiotic prophylaxis		
Craniotomy	Cefazolin	2 g slow IVI	Single dose (if surgery > 4 h re-inject 1 g)
	If allergic: Vancomycin	30 mg/kg slowly IVI over 120 min	Single dose
Neurosurgery transsphenoidal routes and trans-labyrinthine	Cefazolin	2 g slow IVI	Single dose 1 g IVI if surgery > 4 h
	If allergic: Vancomycin	30 mg/kg slowly IVI over 120 min	Single dose
Spine surgery with implantation of prosthetic material	Cefazolin	2 g slow IVI	Single dose 1 g IVI if surgery > 4 h
	If allergic: Vancomycin	30 mg/kg slowly IVI over 120 min	Single dose
Cranio-cerebral wounds	Peni A + IB[b]	2 g slow IVI	2 g every 8 hours 48 h maximum
	If allergic: Vancomycin	30 mg/kg slowly IVI over 120 min	Single dose
Base of skull fracture with rhinorrhoea	No antibiotic prophylaxis		

a: Indications of vancomycin: allergy to beta-lactams; suspected or proven colonisation by methicillin-resistant *staphylococcus,* re-operation in a patient hospitalised in a unit with an ecology including methicilline-resistant *Staphylococcus aureus*, previous antibiotic therapy. The injection lasts 120 minutes and must end at the latest at the beginning of the intervention and the best 30 minutes before.
b: Aminopenicillin + beta-lactamase inhibitor.

Table II: Ophthalmology

SURGERY	PRODUCT	INITIAL DOSE	DOSAGE AND DURATION
Open eye surgery other than cataracts with risk factors	Levofloxazin oral dose	500 mg po	1 tab po 12 hours pre-operative + 1 tab po 2–4 hours pre-operative
Cataract[a]	Intracameral injection cefuroxime[a]	1 mg in 0.1 ml	At the end of surgery
Open eye trauma	Levofloxazin	500 mg	500 mg IV on day 1 + 500 mg orally on day 2
Lacrimal duct wounds	Peni A + IB[b]	2 g	Re-injection of 1 g if surgery > 2 hours
Puncture of anterior chamber Sub-retinal fluid puncture Closed globe surgery Intravitreal injections	No antimicrobial prophylaxis		

a: For cataract surgery with and without risk factors, a single injection into the anterior chamber of cefuroxime (1 mg) has been approved since 2014.
b: Aminopenicillin + beta-lactamase inhibitor.

Table III: Cardiac surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Cardiac surgery	Cefazolin	2 g IVI and 1 g in priming	1 g at the 4th hour intraoperatively
	Cefamandole or cefuroxime	1.5 g IV + 0.75 g priming	1 re-injection 0.75 g every 2 hours intraoperatively
	If allergic: Vancomycin[a]	30 mg/kg/120 min	Single dose
Pacemaker Endovascular procedures	See above heart surgery		Single dose
Pericardial drainage Coronary dilatation/stent ECMO	No antimicrobial prophylaxis		

a: Indications of vancomycin: allergy to beta-lactams; suspected or proven colonisation by methicillin-resistant *staphylococcus*, re-operation in a patient hospitalised in a unit with an ecology including methicilline-resistant *Staphylococcus aureus*, previous antibiotic therapy. The injection lasts 120 minutes and must end at the latest at the beginning of the intervention and the best 30 minutes before.

Table IV: Vascular surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Surgery of the aorta, arteries of the lower limbs, supra-aortic trunks Arterial endoprosthesis Carotid surgery with patch	Cefazolin	2 g slow IVI	Single dose (if time > 4 h, re-inject 1 g)
	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h, re-inject 0.75 g)
	If allergic: Vancomycin[a]	30 mg/kg/120 min	Single dose
Carotid surgery without a patch	No antimicrobial prophylaxis		
Expansion with or without stent	See above aortic surgery		Single dose
Limb amputation	Peni A + IB[b]	2 g IV slow	1 g/6 hours for a period of 48 hours
Vein surgery	No antimicrobial prophylaxis		

a: Indications of vancomycin: allergy to beta-lactams; suspected or proven colonisation by methicillin-resistant *staphylococcus*, re-operation in a patient hospitalised in a unit with an ecology including methicilline-resistant *Staphylococcus aureus*, previous antibiotic therapy. The injection lasts 120 minutes and must end at the latest at the beginning of the intervention and the best 30 minutes before.
b: Aminopenicillin + beta-lactamase inhibitor.

Table V: Orthopaedic surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Joint prosthesis (upper limb, lower limb)	Cefazolin	2 g slow IVI	1 g if duration > 4 h Limited to the operative period (24 hours max)
	Cefuroxime	1.5 g IV slow	0.75 g if duration > 2 h Limited to the operative period (24 hours max)
	If allergic: Clindamycin	900 mg IV slow	Limited to the operative period (24 hours max)
	If allergic: Vancomycin[a]	30 mg/kg/120 min	Single dose
Foreign material (resorbable or not, cement, bone graft) and whatever the technique (percutaneous, videoscopy) Joint surgery arthrotomy	Cefazolin	2 g slow IVI	1 g if duration > 4 h
	If allergic: Clindamycin	900 mg slow IVI	Single dose
	or Vancomycin[a]	30 mg/kg/120 min	Single dose
Arthroscopy without implant (with or without meniscectomy) extra-articular soft tissue surgery without implant	No antimicrobial prophylaxis		
Spine surgery with implantation of prosthetic material	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	If allergic: Vancomycin[a]	30 mg/kg/120 min	Single dose

a: Indications of vancomycin: allergy to beta-lactams, suspected or proven colonisation by methicillin-resistant *staphylococcus*, re-operation in a patient hospitalised in a unit with an ecology including methicilline-resistant *Staphylococcus aureus*, previous antibiotic therapy. The injection lasts 120 minutes and must end at the latest at the beginning of the intervention and the best 30 minutes before.

Table VI: Trauma

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Closed fracture requiring isolated extrafocal osteosynthesis	No antimicrobial prophylaxis		
Closed fracture requiring intrafocal osteosynthesis Open fracture stage I Cauchoix Soft tissue wound non-contused, with or without lesion of artery, nerve, tendon Articular wound	Cefazolin	2 g slow IVI	1 g if duration > 4 h Limited to the operative period (24 hours max)
	Cefuroxime	1.5 g slow IVI	0.75 g if duration > 2 h Limited to the operative period (24 hours max)
	If allergic: Clindamycin *and* Gentamycin	900 mg slow IVI 5 mg/kg/day	600 mg if duration > 4 h
Open fracture stage II and III Cauchoix Large wound soft tissue contused with or without lesion of artery, nerve, tendon	Peni A + IB[a]	2g slow IVI	1 g if duration > 2 h 48 h maximum
	If allergic: Clindamycin *and* Gentamycin	900 mg slow IVI 5 mg/kg/day	600 mg if duration > 4 h 48 h maximum Max 48 hours

a: Aminopenicillin + beta-lactamase inhibitor.

Table VII: Thoracic surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Pulmonary resection (including video-assisted surgery)	Peni A + IB[a]	2 g slow IVI	Single dose (if duration > 2 h re-inject 1 g)
	or Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h re-inject 0.75 g)
	or Cefazolin	2 g slow IVI	Single dose (if surgery > 4 hours, re-inject 1 g)
	If allergic: Clindamycin *and*	900 mg slow IVI	Single dose (if surgery > 4 hours, re-inject 600 mg
	Gentamycin	5 mg/kg/day	Single dose
Mediastinal surgery Surgery for pneumothorax Decortication (uninfected patient) Isolated parietal resection	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h re-inject 0.75 g)
	or Cefazolin	2 g slow IVI	Single dose (if surgery > 4 hours, reinject 1 g)
	If allergic: Clindamycin *and*	900 mg slow IVI	Single dose (if surgery > 4 hours, re-inject 600 mg)
	Gentamycin	5 mg/kg/day	Single dose
Mediastinotomy, videothoracoscopy, tracheostomy, thoracic drainage	No antimicrobial prophylaxis		

a: Aminopenicillin + inhibitor of beta-lactamases.

Table VIII: ENT

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Rhinologic surgery with placement of a graft or re-operation	Cefazolin	2 g slow IVI	Single dose
	Peni A + IB[a]	2 g slow IVI	Single dose
Neck surgery with oropharyngeal opening. Surgery of the salivary glands with access through the oropharyngeal cavity	Peni A + IB[a]	2 g slow IVI	Re-injection of 1 g every 2 h during intraoperative then 1 g every 6 hours for 24 hours
	If allergic: Clindamycin *and*	900 mg slow IVI	Re-injection of 600 mg if duration > 4 h and then 600 mg/6 hours for 24 hours
	Gentamycin	5 mg/kg/day	Single dose
Alveolar surgery	Prevention of endocarditis (see endocarditis prophylaxis)		
Stapes surgery, middle ear surgery Salivary surgery without access through the oropharyngeal cavity Cervicotomy Lymphadenectomy Velopalatin surgery Tonsillectomy	No antimicrobial prophylaxis		

a: Aminopenicillin + inhibitor of beta-lactamases.

Table IX: Maxillo-facial surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Maxillofacial surgery with oropharyngeal opening. Surgery of the salivary glands with access through the oropharyngeal cavity	Peni A + IB[a]	2 g slow IVI	Re-injection of 1 g every 2 h during intraoperative then 1 g every 6 hours for 24 hours
	If allergic: Clindamycin *and*	900 mg slow IVI	Re-injection of 600 mg if duration > 4 h and then 600 mg/6 hours for 24 hours
	Gentamycin	5 mg/kg/day	Single dose
Alveolar surgery	Prevention of endocarditis (see endocarditis prophylaxis)		
Salivary surgery without access through the oropharyngeal cavity Cervicotomy; Lymphadenectomy Velopalatin surgery	No antimicrobial prophylaxis		
Tooth extraction in a non-septic environment	Prevention of endocarditis (see endocarditis prophylaxis)		

a: Aminopenicillin + inhibitor of beta-lactamases.

Table X: Digestive surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Oesophageal surgery (without coloplasty) Gastroduodenal surgery (including endoscopic gastrostomy and duodenopancreatectomy) Pancreatic surgery Liver surgery	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h re-inject 0.75 g)
	If allergic: Clindamycin *and* Gentamycin	900 mg slow IVI 5 mg/kg/day	Single dose (if duration > for 4 h, inject 600 mg) Single dose
Biliary tract surgery (the biliary prosthesis patients are excluded from recommendations)	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h re-inject 0.75 g)
	If allergic: Clindamycin *and* Gentamycin	900 mg slow IVI 5 mg/kg/day	Single dose (if duration > for 4 h, inject 600 mg) Single dose
Gallbladder surgery laparoscopically without risk factors[a]	No antimicrobial prophylaxis		
Colonic and intestinal surgery	Cefoxitin *and* Metronidazole	2 g slow IVI Slow 1 g infusion	Single dose (if duration > 2 h re-inject 1 g) Single dose
	If allergic: Imidazole *and* Gentamycin	1 g infusion 5 mg/kg/day	Single dose Single dose
Anal surgery	Imidazole	1 g infusion	Single dose
Hernia without prosthetic plate	No antimicrobial prophylaxis		
Hernia with establishment of a prosthetic plate	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h re-inject 0.75 g)
	If allergic: Clindamycin *and* Gentamycin	900mg slow IVI 5mg/kg/day	Single dose (if duration > for 4 h, inject 600 mg) Single dose
Eventration	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 h re-inject 0.75 g)
	If allergic: Clindamycin *and* Gentamycin	900 mg slow IVI 5 mg/kg/day	Single dose (if duration > for 4 h, inject 600 mg) Single dose
Abdominal wounds	See colorectal surgery		
Prolaps (any surgical approach)	Peni A + IB[b]	2 g slow IVI	Single dose 1 g if duration > 2 h
	If allergic: Gentamycin *and* Metronidazole	5 mg/kg/day Slow 1 g infusion	Single dose Single dose

a: Laparoscopic cholecystectomy without risk factors: absence of recent cholecystitis, no conversion to laparotomy (on the event of conversion to ABP), no pregnancy, no immune suppression, no exploration of bile duct intraoperatively. If risk factors, refer to the "biliary tract surgery".
b: Aminopenicillin + beta-lactamase inhibitor.

Table XI: Urology

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Prostate surgery			
Endoscopic resection of the prostate, cervical-prostatic incision prostatectomy	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 mg slow IVI	Single dose (if duration > 2 h, re-inject 0.75 g)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
Radical prostatectomy	No antimicrobial prophylaxis		
Prostate biopsy	Ofloxazin	400 mg 1 hour before the biopsy	Single dose
	If allergic:		
	Ceftriaxone	1 g	Single dose
Kidney surgery, adrenal and urinary tract			
Endoscopic treatment of the renal and ureteral ithiases, ureteroscopy, percutaneous nephrolithotomy, nephrostomy, JJ probe mounted or ureteral	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 mg slow IVI	Single dose (if duration > 2 h, re-inject 0.75 g)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
Transurethral resection of the prostate	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 mg slow IVI	Single dose (if duration > 2 h, re-inject 0.75 g)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
Nephrectomy and other upper tract surgery Extracorporeal lithotripsy Adrenalectomy	No antimicrobial prophylaxis		
Bladder surgery			
Transurethral resection of the prostate	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 mg slow IVI	Single dose (if duration > 2 h, re-inject 0.75 g)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
Cystectomy (Bricker, bladder replacement)	PENI A + IB[a]	2 g slow IVI	Single dose (if duration > 2 h re-inject 1 g)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
	and		
	Metronidazole	Slow 1 g infusion	Single dose
Surgery of the urethra			
Urethroplasty, urethrotomy	Cefazolin	2 g slow IVI	Single dose (if duration > 4 h re-inject 1 g)
	Cefuroxime	1.5 mg slow IVI	Single dose (if duration > 2h, re-inject 0.75 g)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
Artificial sphincter	Cefoxitin *or* Amoxicillin + Clavulanic acid	2 g slow IVI	Single dose
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
	and		
	Metronidazole	1 g infusion	
Urethral support (TOT, TVT)	PENI A + IB[a]	2 g slow IVI	Single dose
	If allergic:		
	Gentamycin	5 mg/kg	
	and		
	Metronidazole	1 g infusion	
Male genital system			
Scrotal surgery or rod (not replacement)	No antimicrobial prophylaxis		
Penile prosthesis or testicular	Cefazolin	2 g slow IVI	Single dose (if surgery > 2 hours, re-inject 1 g)
Female genital system			
Treatment of prolapse (any surgical approach)	PENI A + IB[a]	2 g slow IVI	Single dose (if surgery > 2 h, re-inject 1 g)
	If allergic:		
	Metronidazole	1 g infusion	Single dose
	and		
	Gentamycin	5 mg/kg/day	Single dose
Diagnostic investigations Bladder fibroscopy Urodynamic evaluation Ureteroscopic diagnostic	No antimicrobial prophylaxis		

a: Aminopenicillin + beta-lactamase inhibitor.

Table XII: Gynaecology obstetrics

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Hysterectomy (high or low road)	Cefazolin	2 g slow IVI	Single dose (if surgery > 4 hours, re-inject 1 g)
Coelio surgery (Laparoscopic surgery)	Cefuroxime	1.5 mg slow IVI	Single dose (if surgery > 2 hours, re-inject 0.75 g)
	If allergic:		
	Clindamycin	900 mg slow IVI	Single dose
	and		
	Gentamycin	5 mg/kg	Single dose
Laparoscopy diagnostic or exploratory without vaginal incision or digestive	No antimicrobial prophylaxis		
Hysteroscopy hysterosalpingography	No antimicrobial prophylaxis		
Endometrial biopsy	No antimicrobial prophylaxis		
In vitro fertilisation	No antimicrobial prophylaxis		
Insertion of intra-uterine device	No antimicrobial prophylaxis		
Abortion	No antimicrobial prophylaxis		
Caesarean section	Cefazolin	2 g slow IVI	Single dose
	Cefuroxine	1.5 g slow IVI	Single dose
	If allergic:		
	Clindamycin	900 mg slow IVI	Single dose
Mastectomy Reconstruction and/or mammoplasty	Cefazolin	2 g slow IVI	Single dose (1 g if duration > 4 hours)
	Cefuroxine	1.5 g slow IVI	Single dose (0.75 g if surgery > 2 hours)
	If allergic:		
	Clindamycin	900 mg slow IVI	600 mg if surgery > 4 hours
	and		
	Gentamycin	5 mg/kg	Single dose
Simple breast lumpectomy	No antimicrobial prophylaxis		
Prolapse (all surgical approaches; only in case of implementation of prosthetic material: promontofixation, implant placement or strip)	Peni A + IB[a]	2 g slow IVI	Single dose (1 g if surgery > 4 hours)
	If allergic:		
	Gentamycin	5 mg/kg	Single dose
	and		
	Metronidazole	1 g infusion	Single dose

a: Aminopenicillin + beta-lactamase inhibitor.

Table XIII: Interventional surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Embolisation of uterine fibroids	No antimicrobial prophylaxis		
Transjugular intrahepatic portosystemic shunt	No antimicrobial prophylaxis		
Nephrostomy	No antimicrobial prophylaxis		
Endoscopic gastrostomy, sclerosis of oesophageal varicose veins	Peni A +1B[a]	2 g slow IVI	Single dose
	If allergic:		
	Clindamycin	900 mg slow IVI	Single dose
	and		
	Gentamycin	5 mg/kg	Single dose
Puncture under endoscopic ultrasonography (except trans-colorectal puncture)	No antimicrobial prophylaxis		
Endoscopic dilatation, digestive prosthesis, laser, argon, plasma coagulation	No antimicrobial prophylaxis		
Chemo-embolisation	No antimicrobial prophylaxis		
Radio frequency	No antimicrobial prophylaxis		
Catheter or implantable chamber	No antimicrobial prophylaxis		
Angiography/angioplasty	No antimicrobial prophylaxis		
Stent (excluding intra-coronary)	Cefazolin	2 g slow IVI	Single dose (if duration > 4 hours, re-inject 1 g)
	Cefuroxime	1.5 g slow IVI	Single dose (if duration > 2 hours; re-inject 0.75 g)
	If allergic:		
	Vancomycin[b]	30 mg/kg/120 min	Single dose

a: Aminopenicillin + beta-lactamase inhibitor.
b: Indications of vancomycin: allergy to beta-lactams; suspected or proven colonisation by methicillin-resistant *staphylococcus*, re-operation in a patient hospitalised in a unit with an ecology including methicillin-resistant *Staphylococcus aureus*, previous antibiotic therapy. The injection lasts 120 minutes and must end at the latest at the beginning of the intervention and the best 30 minutes before.

Table XIV: Bariatric surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Gastric band	Cefazolin	4 g as an infusion over 30 min	Single dose (if duration > 4 hours, inject 2 g)
	Cefuroxime	3 g as an infusion over 30 min	Single dose (if duration > 2 hours, inject 1.5 g)
	If allergic:		
	Vancomycin[a]	30 mg/kg/120 min	Single dose
Performing a gastric bypass or "sleeve" gastrectomy	Cefoxitin	4 g (30 min infusion)	Single dose (if duration > 2 hours, reinject 2 g)
	If allergic:		
	Clindamycin	2 100 mg slow IVI	Single dose
	and		
	Gentamycin	5 mg/kg	Single dose
Abdominoplasty (dermolipectomy)	Cefazolin	4 g (30 min infusion)[b]	Single dose (if duration > 4 hours, inject 2g)
	Cefuroxime	3 g (30 min infusion)[b]	Single dose (if duration >2 hours, inject 1.5 g)
	If allergic:		
	Clindamycin	2 100 mg slow IVI	Single dose
	and		
	Gentamycin	5 mg/kg (dose based on actual weight)	Single dose

a: Indications of vancomycin: allergy to beta-lactams, suspected or proven colonisation by methicillin-resistant *staphylococcus*, re-operation in a patient hospitalised in a unit with an ecology including methicillin-resistant *Staphylococcus aureus*, previous antibiotic therapy. The injection is done at 1 000 mg/hour maximum and must end at the latest at the beginning of the intervention and at best 30 minutes before. Maximum dose is 4 g.
b: Dose calculated on the actual weight.

Table XV: Plastic and reconstructive surgery

SURGERY	PRODUCT	INITIAL DOSE	RE-INJECTION DOSE AND DURATION
Plastic and reconstructive surgery: class 1 Altemeier	No antimicrobial prophylaxis in the absence of implant		
	Cefazolin	2 g slow IVI	Single dose (if duration > 4 hours, re-inject 1 g)
	If allergic:		
	Clindamycin	900 mg slow IVI	Single dose (if duration > 4 hour, re-inject 600 mg)
Plastic and reconstructive surgery: class 2 Altemeier	Cefazolin	2 g slow IVI	Single dose (if duration > 2 hours, re-inject 1 g)
	If allergic:		
	Clindamycin	900 mg slow IVI	Single dose (if duration > 4 hour, re-inject 600 mg)

Table XVI: Prophylaxis of endocarditis

Antibiotics 30–60min prior to the procedure			
SURGERY	**PRODUCT**	**ADULT**	**CHILDREN**
No allergy to beta-lactams	Amoxicillin or ampicillin	2 g oral or IVI	50 mg/kg orally or IVI
Allergy to beta-lactams	Clindamycin	600 mg orally or IVI	20 mg/kg orally or IVI