Supplementary data

Table 2. Reasons for exclusion after full-text analysis

Study reference	Reason for exclusion
Primary search: systematic reviews and randomized controlled trials	
Aminoshariae & Kulild 2010	Review; no primary research
Brennan et al. 2007	Subject: bacteremia after tooth extraction in children
de Andrade et al. 2012	Subject: effect of chlorhexidine mouthwash on biofilm in dental prostheses
Deacon et al. 1996	Review; no primary research
Dinsbach 2012	Review; no primary research
Drangsholt 1998	Commentary letter to the editor; no primary research
Esposito et al. 2003	Subject: antibiotic prophylaxis during dental implant placement
George 1995	Subject: questionnaire amongst dermatologists
Jones et al. 1997	Subject: hematogenous infections in vascular prosthesis
Krijnen et al. 2001	Subject: cost and effectiveness in patients with rheumatoid arthritis and orthopedic prostheses
Kuong et al. 2009	Review; no primary research
Lauber et al. 2007	Subject: questionnaire on antibiotic prophylaxis prescriptions in Canada
Legout et al. 2012	Review; no primary research
Little et al. 2010	Authors' opinion on AAOS 2009 guideline; no primary research
Little 1994	Review; no primary research
Marculescu & Osmon 2005	Review; no primary research
Pineiro et al. 2010	Subject: effect of chlorhexidine mouthwash on bacteremia after dental implant placement
Rosengren & Dixon 2010	Subject: review on dermatological infection and antibiotic prophylaxis
Salvi et al. 2008	Subject: review on effect of diabetes mellitus II on periodontitis and dental peri-implantitis
Schwartz & Larson 2007	Review; no primary research
Seymour et al. 2003	Review; no primary research
Shurman & Benedetto 2010	Subject: review on antibiotic prophylaxis in dermatology
Strom et al. 2000	Subject: risk factors for endocarditis
Sziegoleit et al. 1999	Subject: analysis of oral microbiome
Tong & Theis 2008	Subject: questionnaire in New Zeeland; no primary research
Tornos et al. 2005	Subject: review on endocarditis
Treister & Glick. 1999	Subject: review on oral healthcare and rheumatoid arthritis
Uçkay et al. 2008	Review; no primary research
Uyemura 1995	Review; no primary research
Van der Bruggen & Mudrikova 2007	Review; no primary research
Watters et al. 2013	Review of AAOS/ADA guideline 2012; no primary research
Wijngaarden & Kruize 2007	Review; no primary research
Secondary search: observational studies	
Hamilton & Jamieson 2008	Subject: prospective study on PJI, but no description of dental treatment related to HPJI
Lacassin et al. 1995	Subject: study on endocarditis risk factors
Meer (van der) et al. 1992	Subject: endocarditis
Meijndert et al. 2010	Subject: oral microbiome
Powell et al. 2005	Subject: periodontal treatment
Wicht et al. 2004	Subject: effect of chlorhexidine mouthwash on prevention of caries
Young et al. 2014	Review; no primary research

Table 4. Bias assessment of the studies included, according to the GRADE method

Study reference	Bias due to a non-representative or ill-defined sample of patients? [a]	Bias due to insufficiently long or incomplete follow-up, or differences in follow-up between treatment groups? [b]	Bias due to ill-defined or inadequately measured outcome? [c]	Bias due to inadequate adjustment for all important prognostic factors? [d]
Ainscow and Denham 1984	unlikely	likely	unclear	likely
Berbari et al. 2010	likely	unclear	unlikely	unlikely
Cook et al. 2007	unlikely	unclear	unlikely	likely
Jacobsen and Murray 1980	unlikely	unclear	unclear	likely
LaPorte et al. 1999	unlikely	unclear	likely	likely
Skaar et al. 2011	unlikely	unclear	likely	unlikely
Swan et al. 2011	likely	unlikely	likely	unlikely
Uçkay et al. 2009	unlikely	unclear	unlikely	unlikely
Waldman et al. 1997	unlikely	unclear	unlikely	unlikely

[a] Failure to develop and apply appropriate eligibility criteria: (a) case-control study: under- or over-matching in case-control studies; (b) cohort study: selection of exposed and unexposed from different populations.
[b] Bias is likely if the percentage of patients lost to follow-up is large; or differs between treatment groups; or the reasons for loss to follow-up differ between treatment groups; or length of follow-up differs between treatment groups or is too short. The risk of bias is unclear if the number of patients lost to follow-up, or the reasons why, are not reported.
[c] Flawed measurement or differences in measurement of outcome in treatment and control group. Bias may also result from a lack of blinding of those assessing outcomes (detection or information bias).
[d] Failure to adequately measure all known prognostic factors and/or failure to adequately adjust for these factors in multivariate statistical analysis.

Table 5. An overview of international recommendations

Country	Reference [a]	Society / profession [a]	A	B	C	D	E	F	G	H
USA	ADA + AAOS 1997	ADA + AAOS	no	yes	yes	2 years	yes	n.m.	yes	Advisory statement
	ADA + AAOS 2003	ADA + AAOS	no	yes	yes	2 years	yes	n.m.	yes	Advisory statement
	AAOS 2009	AAOS	yes	yes	yes	n.m.	yes	n.m.	n.m.	Information statement
	ADA + AAOS 2012	ADA + AAOS	no	yes	n.m.	n.m.	yes	? [c]	n.m.	Evidence based guideline
	Chen et al. 2014	AAOS	no	yes	n.m.	Lifetime [b]	n.m.	n.m.	n.m.	International expert consensus
	Sollecito et al. 2015	ADA	no	yes	n.m.	n.m.	n.m.	n.m.	n.m.	Evidence based guideline
UK	Simmons et al. 1992	BSAC	no	no	n.m.	n.m.	n.m.	n.m.	n.m.	Expert opinion
	Seymour et al. 2003	BOA + BDA	no	yes	n.m.	n.m.	yes	yes	yes	Expert opinion
Australia	Scott et al. 2005	OS + OMFS	no	yes	yes	n.m.	yes	n.m.	yes	Expert opinion
New Zealand	NZDA 2003	NZDA	no	yes	yes	n.m.	yes	n.m.	yes	Code of practice
	NZDA 2013	NZDA	no	yes	n.m.	n.m.	yes	n.m.	yes	Code of practice
Canada	CADTH 2016	CADTH	no	no	n.m.	n.m.	n.m.	n.m.	n.m.	Conclusion of review
South Africa	Kotzé 2009	OMFS	no	yes	yes	n.m.	yes	n.m.	yes	Conclusion of review
France	Legout et al. 2012	AFSSAPS + ANSM	no	no	no	no	yes	n.m.	yes	Evidence based guideline
Switzerland	Rossi et al. 2005	SGINF	no	yes	yes	n.m.	n.m.	n.m.	n.m.	Conclusion of review and expert opinion
	Uçkay et al. 2010	OS	no	yes	no	n.m.	yes	n.m.	n.m.	Conclusion of review
	Sendi et al. 2016	OS + I	no	no	yes	n.m.	yes	yes	yes	Conclusion of review
Italy	Termine et al. 2009	D	no	yes	n.m.	n.m.	n.m.	n.m.	n.m.	Conclusion of review
Norway	Olsen et al. 2010	OS + MI	no	n.m.	n.m.	n.m.	yes	n.m.	n.m.	Conclusion of review
Sweden	Sw. Guideline 2012	OS	no	yes	n.m.	< 3 mo	yes	n.m.	yes	Evidence based guideline
The Netherlands	Swierstra et al. 2011	OS	no	yes	yes	n.m.	n.m.	n.m.	n.m.	Evidence based guideline

[a] AAOS: American Academy of Orthopaedic Surgeons; ADA: American Dental Association; AFSSAPS/ANSM: French health authorities; BASC: British Society for Antimicrobial Chemotherapy; BOA: British Orthopaedic Association; DE: dentists; IN: infectiologists; NZDA: New Zealand Dental Association; MI: microbiologists; OMFS: oral and maxillofacial surgeons; OS: orthopedic surgeons; SGINF: Swiss Society for Infectious Diseases.

A. AB-prophylaxis should always be considered

B. AB-prophylaxis should be considered in patients with risk factors

C. AB-prophylaxis should be considered in specific dental procedures with an increased risk

D. AB-prophylaxis should be considered in the postoperative risk period

[b] Lifetime for high-risk patients

E. Recommendations for good oral health

F. Recommendations for chlorhexidine mouthwash

[c] Indecisive

G. Dental screening before implant placement

H. Type of recommendation

n.m.: not mentioned.

Reference list Table 5, Supplementary data

American Academy of Orthopaedic Surgeons. Antibiotic prophylaxis for bacteremia in patientswith joint replacements. Information Statement. 2009. wwwaaosorg/about/papers/advistmt/1033asp (access 11-11-2012, removed from website) 2009.

American Academy of Orthopaedic Surgeons, American Dental Association. Prevention of orthopaedic implant infection in patients undergoing dental procedures. Evidence based guideline and evidence report. v0.2.2.2.2012; 2012. Website AAOS, Clinical Practice Guideline Unit: http://wwwaaosorg/Research/guidelines/PUDP/PUDP_guidelinepdf (access: 02-05-2015) 2012.

American Dental Association, American Academy of Orthopaedic Surgeons. Antibiotic prophylaxis for dental patients with total joint replacements. Advisory statement. J Am Dent Assoc 1997; 128: 1004-8.

American Dental Association, American Academy of Orthopaedic Surgeons. Antibiotic prophylaxis for dental patients with total joint replacements. J Am Dent Assoc 2003; 134: 895-9.

Canadian Agency for Drugs and Technologies in Health. CADTH Rapid Response Reports. In: Antibiotic Prophylaxis in Patients with Orthopedic Implants Undergoing Dental Procedures: A Review of Clinical Effectiveness, Safety, and Guidelines. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health. Copyright (c) 2016.

Chen A, Haddad F, Lachiewicz P, et al. Prevention of late PJI. J Arthroplasty 2014; 29: 119-28.

New Zealand Dental Association. NZDA code of practice: Antibiotic prophylaxis for dental treatment of patients with prosthetic joint replacements (adopted March 2003). N Z Dent J 2003; 99: 63-4.

New Zealand Dental Association. Antibiotic prophylaxis for patients with prosthetic joint replacements undergoing dental treatment. Code of Practice. http://wwwjustsmileconz/_files/Prosthesis%20antibiotic%20Prophylaxispdf 2013.

Scott J F, Morgan D, Avent M, Graves S, Goss A N. Patients with artificial joints: do they need antibiotic cover for dental treatment? Austr Dent J 2005; 50: S45-S53.

Seymour RA, Whitworth J M, Martin M. Antibiotic prophylaxis for patients with joint prostheses - still a dilemma for dental practitioners. British Dental Journal 2003; 194: 649-53.

Simmons N A, Ball A P, Cawson R A, et al. Case against antibiotic prophylaxis for dental treatment of patients with joint prostheses. Letter to Editor. Lancet 1992; 339: 301.

Sollecito P, Lockhart P B, Paumier T M, et al. The use of prophylactic antibiotics prior to dental procedures in patients with prosthetic joints. Evidence based guideline for dental practitioners - a report of the American Dental Association Council on Scientific Affairs. J Am Dent Assoc 2015; 146: 11-16.e8.

Kotzé M J. Prosthetic joint infection, dental treatment and antibiotic prophylaxis. Orthop Rev (Pavia) 2009; 1: e7.

Legout L, Beltrand E, Migaud H, Senneville E. Antibiotic prophylaxis to reduce the risk of joint implant contamination during dental surgery seems unnessary. Orthop Traumatol Surg Res 2012; 98: 910-4.

Olsen I, Snorrason F, Lingaas E. Should patients with hip joint prosthesis receive antibiotic prophylaxis before dental treatment? J Oral Microbiol 2010; 2.

Rossi M, Zimmerli W, Furrer H, Zanetti G, Mühlemann K, Tauber MG. Antibiotika zur Prophylaxe hämatogener Spätinfektionen von Gelenkprothesen (die Schweizerische Gesellschaft für Infektiologie). Schweiz Monatsschr Zahnmed 2005; 115: 571-5.

Sendi P, Uckay I, Suva S, Vogt M. Antibiotic prophylaxis during dental procedures in patients with prosthetic joints. J Bone Joint Infect 2016; 1: 42-9.

Swedish Guideline. Indikationer för antibiotikaprofylax i tandvården – ny rekommendation (Swedish). http://wwwlakemedelsverketse/upload/omlakemedelsverket/publikationer/information-fran-lakemedelsverket/2012/Rev%20130422_inneh%C3%A5llsf%C3%B6rt_Information%20fr%C3%A5n%20L%C3%A4kemedelsverket_nr%205_2012_webbpdf (access 30-09-2014) 2012.

Swierstra B A, Vervest A M, Walenkamp G H, et al. Dutch guideline on total hip prosthesis. Acta Orthop 2011; 82: 567-76.

Termine N, Panzarella V, Ciavarella D, et al. Antibiotic prophylaxis in dentistry and oral surgery: use and misuse. Int Dent J 2009; 59:2 63-70.

Uckay I, Hoffmeyer P, Trampuz A, et al. Utilité de la prophylaxie antibiotique avant un geste dentaire pour les porteurs de prothèses totales du genou ou de la hanche. Revue Méd Suisse 2010; 6 (243): 727-30.