

**APPENDIX****ONLINE SEARCH STRATEGY:****EBM Reviews:**

((incidence\* or epidemio\*).ab,fs,hw,ti or (((number or new) adj2 cases) or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or (morbidity adj2 (rate\* or pattern\*)) or infection-rate\* or sampl\* or age-distribution or sex-distribution or geographic-distribution\* or case-mix or community-assessment\* or disease-registr\* or prevalence).ab,fs,hw,ti.) AND (endocarditis.hw,ti. or (endocarditis adj5 (incidence\* or epidemio\* or cases or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or rate\* or prevalence)).ab,hw,ti.) NOT ("case report".pt,ti.) Limit to English, 2000+

**Embase (1974+)**

(exp incidence/ or exp epidemiological data/ or exp epidemiology/ or (((number or new) adj2 cases) or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or (morbidity adj2 (rate\* or pattern\*)) or infection-rate\* or sampl\* or age-distribution or sex-distribution or geographic-distribution\* or case-mix or community-assessment\* or disease-registr\* or prevalence).ab,kw,ti.) AND (endocarditis/ or bacterial endocarditis/ or fungal endocarditis/ or prosthetic valve endocarditis/ or subacute endocarditis/ or [endocarditis.kw](#),ti. or (endocarditis adj5 (incidence\* or epidemio\* or cases or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or rate\* or prevalence)).ab.) NOT (exp animal/ not exp human/, 12 "case report".kw,pt,ti.) Limit to English, 2000+, article or article in press

**Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily:**

(Incidence/ or exp Epidemiology/ or exp Population Surveillance/ or (incidence\* or epidemio\*).ab,hw,kf,ti,fx. or (((number or new) adj2 cases) or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or (morbidity adj2 (rate\* or pattern\*)) or infection-rate\* or sampl\* or age-distribution or sex-distribution or geographic-distribution\* or case-mix or community-assessment\* or disease-registr\* or prevalence).ab,kf,ti.) AND (Endocarditis, Bacterial/ or Endocarditis/ or Endocarditis, Subacute Bacterial/ or [endocarditis.kw](#),ti. or (endocarditis adj5 (incidence\* or epidemio\* or cases or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or rate\* or prevalence)).ab.) NOT (exp Animals/ not Humans/, "case report".kw,pt,ti.) Limit to English, 2000+

**Scopus:**

(( ( TITLE ( endocarditis ) OR KEY ( endocarditis ) AND TITLE-ABS-KEY ( endocarditis W/5 ( incidence\* OR epidemio\* OR cases OR surveillance OR biosurveillance OR pharmacoepidemiolog\* OR seroepidemio\* OR rate\* OR prevalence ) ) ) ) AND ( ( TITLE ( endocarditis ) OR KEY ( endocarditis ) AND TITLE-ABS-KEY ( endocarditis W/5 ( incidence\*

OR epidemio\* OR cases OR surveillance OR biosurveillance OR pharmacoepidemiolog\* OR seroepidemio\* OR rate\* OR prevalence ) ) ) ) AND NOT ( TITLE ( "case report\*" OR animal\* OR rat OR rats OR mice OR mouse OR rabbit\* OR rodent\* ) ) AND ( LIMIT-TO ( DOCTYPE , "ar" ) OR LIMIT-TO ( DOCTYPE , "re" ) OR LIMIT-TO ( DOCTYPE , "er" ) ) AND ( LIMIT-TO ( LANGUAGE , "English" ) ) AND ( LIMIT-TO ( SRCTYPE , "j" ) ) AND ( LIMIT-TO ( PUBYEAR , 2020 ) OR LIMIT-TO ( PUBYEAR , 2019 ) OR LIMIT-TO ( PUBYEAR , 2018 ) OR LIMIT-TO ( PUBYEAR , 2017 ) OR LIMIT-TO ( PUBYEAR , 2016 ) OR LIMIT-TO ( PUBYEAR , 2015 ) OR LIMIT-TO ( PUBYEAR , 2014 ) OR LIMIT-TO ( PUBYEAR , 2013 ) OR LIMIT-TO ( PUBYEAR , 2012 ) OR LIMIT-TO ( PUBYEAR , 2011 ) OR LIMIT-TO ( PUBYEAR , 2010 ) OR LIMIT-TO ( PUBYEAR , 2009 ) OR LIMIT-TO ( PUBYEAR , 2008 ) OR LIMIT-TO ( PUBYEAR , 2007 ) OR LIMIT-TO ( PUBYEAR , 2006 ) OR LIMIT-TO ( PUBYEAR , 2005 ) OR LIMIT-TO ( PUBYEAR , 2004 ) OR LIMIT-TO ( PUBYEAR , 2003 ) OR LIMIT-TO ( PUBYEAR , 2002 ) OR LIMIT-TO ( PUBYEAR , 2001 ) OR LIMIT-TO ( PUBYEAR , 2000 ) ) )

**Web of Science:**

(TOPIC: (incidence\* or epidemio\*) OR TOPIC: (((number or new) NEAR/2 cases) or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or (morbidity NEAR/2 (rate\* or pattern\*)) or infection-rate\* or sampl\* or age-distribution or sex-distribution or geographic-distribution\* or case-mix or community-assessment\* or disease-registr\* or prevalence)) AND TOPIC: (endocarditis) OR TOPIC: (endocarditis NEAR/5 (incidence\* or epidemio\* or cases or surveillance or biosurveillance or pharmacoepidemiolog\* or seroepidemio\* or rate\* or prevalence))) NOT TI=("case report\*" OR animal\* OR rat OR rats OR mice OR mouse OR rabbit\* OR rodent\*), Limit to English, Article, 2000+

Table 1: Quality assessment of included studies.

<b>Study</b>	<b>Adequacy of population definition</b>	<b>Sampling techniques</b>	<b>Disease definition</b>	<b>Completeness of case ascertainment</b>
Scudeller 2009	Adequate	Adequate	Adequate	Adequate
Fedeli 2011	Adequate	Adequate	Inadequate	Adequate
Thornhill 2011	Adequate	Adequate	Inadequate	Adequate
Ternhag 2013	Adequate	Adequate	Inadequate	Adequate
Dayer 2015	Adequate	Adequate	Inadequate	Adequate
Cresti 2016	Adequate	Adequate	Adequate	Adequate
Erichsen 2016	Adequate	Adequate	Inadequate	Adequate
Keller 2016	Adequate	Adequate	Inadequate	Adequate
van den Brink 2016	Adequate	Adequate	Inadequate	Adequate
Olmos 2017	Adequate	Adequate	Inadequate	Adequate
Ahtela 2018	Adequate	Adequate	Adequate	Adequate
Jordal 2018	Adequate	Adequate	Adequate	Adequate
Ortega 2019	Adequate	Adequate	Inadequate	Adequate
Jensen 2020	Adequate	Adequate	Inadequate	Adequate
Quan 2020	Adequate	Adequate	Inadequate	Adequate
Shah 2020	Adequate	Adequate	Inadequate	Adequate
Thornhill 2020	Adequate	Adequate	Inadequate	Adequate
Vähäsarja 2020	Adequate	Adequate	Adequate	Adequate

Table 2. Least squares regression slopes for each study in pooled log scale regression analysis for temporal trends of IE incidence, including Swedish studies.

Studies Included	Country	Incidence per 100k		Log incidence	
		Estimated annual increase (per 100k)	95% CI*	Estimated annual increase (%)	95% CI*
Shah 2020	Scotland	0.040	0.033-0.047	0.54%	0.44-0.64%
Olmos 2017	Spain	0.064	0.050-0.078	2.09%	1.61-2.57%
Dayer & Thornhill 2011-2020	England	0.144	0.126-0.162	4.23%	3.82-4.64%
Jensen 2020	Denmark	0.312	0.263-0.361	4.17%	3.50-4.84%
Fedeli 2011	Italy	0.128	0.052-0.204	2.83%	1.58-4.08%
Ahtela 2019	Finland	0.103	0.024-0.182	1.66%	0.42-2.89%
van den Brink 2016	Netherlands	0.583	0.470-0.696	13.05%	10.59-15.51%
Ternhag 2013	Sweden (2000-2007)	0.169	0.055-0.283	2.21%	0.74-3.66%
Vähäsarja 2020	Sweden (2008-2017)	0.327	0.209-0.445	5.76%	3.63-7.89%
Keller 2016	Germany	0.535	0.387-0.683	4.52%	1.77-6.39%
	Average of individual studies	0.241	0.103-0.378	4.11%	1.59-6.62%
	Pooled regression	0.161	0.043-0.279	2.81%	0.85-4.77%

\*CI: Confidence Interval

Figure 1: Individual and pooled incidence rate per 100,000/year, log scale regression, including Swedish studies.

