**Supplementary Tables.**

**Supplementary Table 1. Overview of short-course vs long-course antibiotic treatment for bacterial infections in primary care**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Database** | **Interface** | **Coverage** | **Dates** | **Hits** |
| Cinahl | EBSCOHost | 1982-present | April 6, 2016 | 119 |
| Cochrane Database of Systematic  | Cochrane Library, Wiley | Issue 4 of 12, April 2016 | April 6, 2016 | 50 |
| Database of Abstracts of Reviews of Effects | Cochrane Library, Wiley | Issue 2 of 4, April 2015 | April 6, 2016 | 7 |
| Embase | OvidSP | 1974 to 2016 April 04 | April 6, 2016 | 133 |
| Medline | OvidSP | 1946-present | April 6, 2016 | 186 |
| Total: | 495 |
| Duplicates: | 160 |
| Final total: | 335 |

**Supplementary Table 2. Query Data from CINAHL, Embase, Medline, and Cochrane Database of Systematic Reviews and Database of Abstracts of Reviews of Effects**

|  |  |  |
| --- | --- | --- |
| **CINAHL** |  |  |
| # | Query | Results |
| S1 | (MH "Antibiotics+") | 31,058 |
|
|
| S2 | TI ( antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\* ) OR AB ( antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\* ) | 19,301 |
|
|
| S3 | S1 OR S2 | 40,397 |
|
|
| S4 | TI ( ((short\* or long\* or standard\* or prolong\*) N2 term\*) ) OR AB ( ((short\* or long\* or standard\* or prolong\*) N2 term\*) ) | 82,461 |
|
|
| S5 | TI ( ((short\* or long\* or standard\* or prolong\*) N2 course\*) ) OR AB ( ((short\* or long\* or standard\* or prolong\*) N2 course\*) ) | 2,226 |
|
|
| S6 | TI ( ((short\* or long\* or standard\* or prolong\*) N5 duration\*) ) OR AB ( ((short\* or long\* or standard\* or prolong\*) N5 duration\*) ) | 8,563 |
|
|
| S7 | TI ( ((treatment or therap\*) N3 (duration or length or day\*)) ) OR AB ( ((treatment or therap\*) N3 (duration or length or day\*)) ) | 10,427 |
|
|
| S8 | (MH "Treatment Duration") | 4,116 |
|
|
| S9 | S4 OR S5 OR S6 OR S7 OR S8 | 103,013 |
|
|
| S10 | S3 AND S9 | 3,562 |
|
|
| S11 | TI ( ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) AND (long\* or short\* or standard\* or prolong\*)) ) OR AB ( ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) N5 (long\* or short\* or standard\* or prolong\*)) ) | 1,151 |
|
|
| S12 | TI ( ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) AND (duration or length or day\*)) ) OR AB ( ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) N5 (duration or length or day\*)) ) | 1,211 |
|
|
| S13 | S10 OR S11 OR S12 | 4,609 |
|
|
| S14 | (MH "Family Practice") | 11,679 |
|
|
| S15 | (MH "Physicians, Family") | 8,919 |
|
|
| S16 | (MH "Primary Health Care") | 32,699 |
|
|
| S17 | TI ( ((general or family) n2 (practi\* or physician\* or doctor\*)) ) OR AB ( ((general or family) n2 (practi\* or physician\* or doctor\*)) ) | 20,439 |
|
|
| S18 | TI ( "primary care" or "primary health\*" ) OR AB ( "primary care" or "primary health\*" ) | 36,253 |
|
|
| S19 | (MH "Office Visits") | 2,566 |
|
|
| S20 | (MH "Ambulatory Care Facilities+") OR (MH "Community Health Centers") OR (MH "Outpatient Service") OR (MH "Practitioner's Office") | 16,532 |
|
|
| S21 | (MH "Outpatients") | 33,086 |
|
|
| S22 | (MH "Ambulatory Care") OR (MH "Ambulatory Care Nursing") | 7,516 |
|
|
| S23 | TI ( community\* or outpatient\* or clinic or clinics or ambulatory\* ) OR AB ( community\* or outpatient\* or clinic or clinics or ambulatory\* ) | 163,674 |
|
|
| S24 | (MH "Emergency Service+") | 30,630 |
|
|
| S25 | (MH "Emergency Care+") | 26,646 |
|
|
| S26 | TI ( (emergency n2 (department\* or dept\* or unit\* or ward\* or service\*)) ) OR AB ( (emergency n2 (department\* or dept\* or unit\* or ward\* or service\*)) ) | 27,873 |
|
|
| S27 | TI accident n2 emergency OR AB accident n2 emergency | 1,757 |
|
|
| S28 | S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25 OR S26 OR S27 | 310,304 |
|
|
| S29 | S13 AND S28 | 852 |
|
| S30 | PT meta-analysis OR MH meta-analysis OR TI ( meta-analysis OR metaanalysis OR systematic review OR medline ) OR AB ( meta-analysis OR metaanalysis OR systematic review OR medline ) OR PT review | 148,613 |
| S31 | S29 AND S30 | 119 |
| **Embase** |
| 1 | exp \*antibiotic agent/ or \*antiinfective agent/ | 555860 |
| 2 | (antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*).ti,ab. | 391148 |
| 3 | 1 or 2 | 783552 |
| 4 | ((short\* or long\* or standard\* or prolong\*) adj2 term\*).ti,ab. | 962094 |
| 5 | ((short\* or long\* or standard\* or prolong\*) adj2 course\*).ti,ab. | 25733 |
| 6 | ((short\* or long\* or standard\* or prolong\*) adj5 duration).ti,ab. | 109909 |
| 7 | ((treatment or therap\*) adj3 (duration or length or day\*)).ti,ab. | 163832 |
| 8 | \*treatment duration/ | 1319 |
| 9 | 4 or 5 or 6 or 7 or 8 | 1215146 |
| 10 | 3 and 9 | 45156 |
| 11 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) adj5 (long\* or short\* or standard\* or prolong\*)).ti,ab. | 14243 |
| 12 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) adj5 (duration or length or day\*)).ti,ab. | 13106 |
| 13 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) and (long\* or short\* or standard\* or prolong\*)).ti. | 2177 |
| 14 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) and (duration or length or day\*)).ti. | 873 |
| 15 | 10 or 11 or 12 or 13 or 14 | 61184 |
| 16 | general practice/ | 74352 |
| 17 | general practitioner/ | 72800 |
| 18 | exp primary health care/ | 123709 |
| 19 | ((general or family) adj2 (practi\* or physician\* or doctor\*)).ti,ab. | 125201 |
| 20 | (primary care or primary health\*).ti,ab. | 124984 |
| 21 | ambulatory care/ | 32244 |
| 22 | outpatient department/ | 48180 |
| 23 | outpatient care/ or outpatient/ | 100940 |
| 24 | community care/ | 50950 |
| 25 | community\*.ti,ab. | 412418 |
| 26 | outpatient\*.ti,ab. | 188752 |
| 27 | ambulator\*.ti,ab. | 86656 |
| 28 | clinic?.ti,ab. | 382475 |
| 29 | emergency ward/ | 81931 |
| 30 | emergency health service/ | 76691 |
| 31 | (emergency adj2 (department\* or dept\* or unit? or ward? or service?)).ti,ab. | 102403 |
| 32 | (accident adj2 emergency).ti,ab. | 5111 |
| 33 | 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 | 1425793 |
| 34 | 15 and 33 | 7638 |
| 35 | (meta-analysis or systematic review or MEDLINE).tw. | 199182 |
| 36 | 34 and 35 | 133 |
| **Medline** |
| 1 | anti-infective agents/ or anti-bacterial agents/ | 305218 |
| 2 | (antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*).ti,ab. | 297279 |
| 3 | 1 or 2 | 461876 |
| 4 | ((short\* or long\* or standard\* or prolong\*) adj2 term\*).ti,ab. | 726661 |
| 5 | ((short\* or long\* or standard\* or prolong\*) adj2 course\*).ti,ab. | 18408 |
| 6 | ((short\* or long\* or standard\* or prolong\*) adj5 duration).ti,ab. | 80833 |
| 7 | ((treatment or therap\*) adj3 (duration or length or day\*)).ti,ab. | 111869 |
| 8 | Time Factors/ | 1E+06 |
| 9 | 4 or 5 or 6 or 7 or 8 | 2E+06 |
| 10 | 3 and 9 | 43786 |
| 11 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) adj5 (long\* or short\* or standard\* or prolong\*)).ti,ab. | 10083 |
| 12 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) adj5 (duration or length or day\*)).ti,ab. | 8778 |
| 13 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) and (long\* or short\* or standard\* or prolong\*)).ti. | 1686 |
| 14 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) and (duration or length or day\*)).ti. | 667 |
| 15 | 10 or 11 or 12 or 13 or 14 | 53765 |
| 16 | exp General Practice/ | 68479 |
| 17 | general practitioners/ or physicians, family/ or physicians, primary care/ | 21640 |
| 18 | Primary Health Care/ | 59344 |
| 19 | ((general or family) adj2 (practi\* or physician\* or doctor\*)).ti,ab. | 98918 |
| 20 | (primary care or primary health\*).ti,ab. | 98304 |
| 21 | Office Visits/ | 5864 |
| 22 | Outpatients/ | 11467 |
| 23 | exp Ambulatory Care Facilities/ | 48477 |
| 24 | Ambulatory Care/ | 37710 |
| 25 | community\*.ti,ab. | 334242 |
| 26 | outpatient\*.ti,ab. | 124613 |
| 27 | ambulator\*.ti,ab. | 64502 |
| 28 | clinic?.ti,ab. | 254669 |
| 29 | Emergency Service, Hospital/ | 49153 |
| 30 | emergency medical services/ or triage/ | 41997 |
| 31 | (emergency adj2 (department\* or dept\* or unit? or ward? or service?)).ti,ab. | 71332 |
| 32 | (accident adj2 emergency).ti,ab. | 4155 |
| 33 | 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 | 1E+06 |
| 34 | 15 and 33 | 5630 |
| 35 | Cochrane database of systematic reviews.jn. or search.tw. or meta-analysis.pt. or Medline.tw. or systematic review.tw. | 298675 |
| 36 | 34 and 35 | 186 |
| **Cochrane Database of Systematic Reviews and Database of Abstracts of Reviews of Effects** |
| #1 | MeSH descriptor: [Anti-Bacterial Agents] explode all trees |
| #2 | MeSH descriptor: [Anti-Infective Agents] this term only |
| #3 | antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*:ti,ab,kw (Word variations have been searched) |
| #4 | #1 or #2 or #3  |
| #5 | ((short\* or long\* or standard\* or prolong\*) near/2 term\*):ti,ab,kw (Word variations have been searched) |
| #6 | ((short\* or long\* or standard\* or prolong\*) near/2 course\*):ti,ab,kw (Word variations have been searched) |
| #7 | ((short\* or long\* or standard\* or prolong\*) near/5 duration):ti,ab,kw (Word variations have been searched) |
| #8 | ((treatment or therap\*) near/3 (duration or length or day\*)):ti,ab,kw (Word variations have been searched) |
| #9 | MeSH descriptor: [Time Factors] explode all trees |
| #10 | #5 or #6 or #7 or #8 or #9  |
| #11 | #4 and #10  |
| #12 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) near/5 (long\* or short\* or standard\* or prolong\*)):ti,ab,kw (Word variations have been searched) |
| #13 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) near/5 (duration or length or day\*)):ti,ab,kw (Word variations have been searched) |
| #14 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) and (long\* or short\* or standard\* or prolong\*)):ti (Word variations have been searched) |
| #15 | ((antibiotic\* or anti-biotic\* or antibacterial\* or anti-bacterial\* or antimicrobrial\* or anti-microbrial\* or antiinfective\* or anti-infective\*) and (duration or length or day\*)):ti (Word variations have been searched) |
| #16 | #11 or #12 or #13 or #14 or #15  |
| #17 | MeSH descriptor: [General Practice] explode all trees |
| #18 | MeSH descriptor: [Physicians, Family] explode all trees |
| #19 | MeSH descriptor: [General Practitioners] explode all trees |
| #20 | MeSH descriptor: [Physicians, Primary Care] explode all trees |
| #21 | MeSH descriptor: [Primary Health Care] this term only |
| #22 | ((general or family) near/2 (practi\* or physician\* or doctor\*)):ti,ab,kw (Word variations have been searched) |
| #23 | primary care or "primary health\*":ti,ab,kw (Word variations have been searched) |
| #24 | MeSH descriptor: [Office Visits] explode all trees |
| #25 | MeSH descriptor: [Ambulatory Care Facilities] explode all trees |
| #26 | MeSH descriptor: [Ambulatory Care] this term only |
| #27 | MeSH descriptor: [Outpatients] explode all trees |
| #28 | community\* or outpatient\* or clinic or clinics or ambulatory\*:ti,ab,kw (Word variations have been searched) |
| #29 | MeSH descriptor: [Emergency Service, Hospital] explode all trees |
| #30 | MeSH descriptor: [Emergency Medical Services] this term only |
| #31 | (emergency near/2 (department\* or dept\* or unit\* or ward\* or service\*)):ti,ab,kw (Word variations have been searched) |
| #32 | accident near/2 emergency:ti,ab,kw (Word variations have been searched) |
| #33 | #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32  |
| #34 | #16 and #33  |

**Supplementary Table 3. Definition of secondary outcomes for pediatric and adult studies**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Condition** | **Microbiological cure/failure** | **Adverse events** | **Relapse** | **Recurrence** | **Other** |
| Falagas, 2008(a) | Group A Streptococcal tonsillopharyngitis | Eradication of Group A streptococcus at end-of-therapy  | Total adverse events and withdrawals due to adverse events | Growth of same Group A streptococcus type as initial isolate following microbiological eradication  | Growth of different Group A streptoccous type than the initial isolate following microbiological eradication  |  |
| Haider, 2008 | Community acquired pneumonia |   |   | Development of any sign of community acquired pneumonia within 7 days after fast breathing had returned to normal. |   | Mortality |
| Kozyrskyj 2010 | Acute otitis media (AOM) |   | Gastrointestinal symptoms |  Relapse of AOM at 1-3 months |  Recurrent of AOM at 1-3 months | Persistence of middle ear effusion |
| Michael, 2010 | Urinary tract infection (UTI) | Significant bacteriuria (colony count > 10,000 organisms/ml of urine) at completion of therapy  | Side effects of therapy; Gastrointestinal, dizziness, rash symptoms |   | UTI >= 1 month after completing treatment;  | Development of resistant bacteria; Compliance with therapy |
| Falagas, 2008(b) | Sinusitis | Eradication of pre-treatment isolated pathogens in post-treatment cultures, or presumed eradication on the basis of clinical cure, if cultures were not performed | Any adverse event, or withdrawal due to adverse events | Reappearance of signs and symptoms in patients clinically cured or improved at test-of-cure evaluation |   |  |
| Katchman, 2005  | Non-pregnant women with uncomplicated cystitis | Presence of positive urine culture within 2 and 8 weeks of follow up | Drug-related adverse events  |   | Growth of pathogens resistant to study antibiotic within 2-8 weeks from treatment | Worsening of disease = occurrence of pyelonephritis during follow up for 8 weeks |
| Kyriakidou, 2008 | Acute pyelonephritis | Bacteriological efficacy = yielding sterile urine or positive cultures with <10 cfu/ml of urine at test-of-cure visit  | Adverse events recorded in tolerability assessment  | Reappearance of original strain in urine culture between test-of-cure and follow up visit | Appearance of different strain in urine culture between test-of-cure and follow up visit |   |
| Li, 2007 | Community acquired pneumonia | Bacteriological failure | Clinical symptoms or laboratoryabnormalities deemed likely to be related to medication use |   |   | Mortality |
| Lutters, 2008 | Acute uncomplicated lower UTI in elderly women | Significant positive urine culture at follow-up | Total rate of adverse reactions; Discontinuations of treatment due to adverse drug reactions |  Relapse with same organism or reinfection with a different one | Reappearance of symptoms after initial clinical cure; Recurrence of bacterial infection after initial eradication of bacteria | Mental and functional status, development of pyelonephritis, urosepsis or other rMortality Convenience for patient |

**Supplementary Table 4. Amstar ratings of included studies**

|  |  |  |
| --- | --- | --- |
| **AMSTAR Criteria** | **Pediatric** | **Adults** |
| Falagas, 2008(a) | Haider, 2011 | Kozyrskyj 2010 | Michael, 2010 | Falagas, 2008(b) | Katchman, 2005 | Kyriakidou 2008 | Li. 2007 | Lutters, 2008 |
| Was an 'a priori' design provided? | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Was there duplicate study selection and data extraction? | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Was a comprehensive literature search performed? | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 |
| Was the status of publication (i.e. grey literature) used as an inclusion criterion? | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| Was a list of studies (included and excluded) provided? | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Were the characteristics of the included studies provided? | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Was the scientific quality of the included studies assessed and documented? | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 |
| Was the scientific quality of the included studies used appropriately in formulating conclusions? | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| Were the methods used to combine the findings of studies appropriate? | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Was the likelihood of publication bias assessed? | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| Was the source of funding and conflict of interest stated? | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Score | 9 | 10 | 9 | 10 | 8 | 9 | 9 | 7 | 9 |
| 1 = Yes 0 = No |  |  |  |  |  |  |  |  |  |

**Supplementary Table 5. Pediatric results: secondary outcomes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Condition(Source systematic review)** | **Secondary Outcome** | **Definition of short vs long courses** | **Studies (#)**  | **Patients (#)** | **Relative effect of short compared to long duration (95%CI)** | **Risk Measure Interpretation** | **Type of antibiotic course results support** |
| Group A Streptococcaltonsillopharyngitis(Falagas, 2008(a)) | Microbiological eradication | Short vs long | 6 | 1298 | 1.06 (0.99, 1.13)  | OR > 1 supports short course | No difference for short vs. long |
|   | Bacteriological relapse | Short vs long | 3 | 755 | 0.78 (0.54, 1.13) | No difference for short vs. long |
|  | Recurrence | Short vs long | 2 | 564 | 0.43 (0.13, 1.39) | No difference for short vs. long |
|  | Adverse events | Short vs long | 2 | 789 | 1.23 (0.68, 2.22) | No difference for short vs. long |
|  Community acquired pneumonia (Haider, 2011) | Treatment failure   | 3 vs. 5 days  | 3 | 5763 | 1.07 (0.92, 1.25) | RR > 1 supports long course | No difference for short vs. long |
|   | 3 vs. 5 days (amox) | 2 | 4012 | 1.11 (0.94, 1.33) | No difference for short vs. long |
|   | 3 vs. 5 days (cotrimoxazole) | 1 | 1751 | 0.97 (0.72, 1.30) | No difference for short vs. long |
|   | Relapse rate   | 3 vs 5 days (with same abx) | 4 | 5469 | 1.09 (0.84, 1.42) | No difference for short vs. long |
|   | 3 vs. 5 days (for amox) | 2 | 3577 | 1.05 (0.69, 1.60) | No difference for short vs. long |
|   | 3 vs. 5 days (cotrimoxazole) | 2 | 1892 | 1.12 (0.90, 1.58) | No difference for short vs. long |
|  Acute otitis media (Kozyrskyj, 2010) | Treatment failure at 8-19 days | >48 hours vs. > 7 days | 11 | 3932 | 1.37 (1.15, 1.64) | OR >1 supports long course | Long |
|  | Treatment failure at 20-30 days | >48 hours vs. >7 days | 9 | 2476 | 1.16 (0.94, 1.42) | No difference for short vs. long |
|  | Treatment failure at 3 months or less | >48 hours vs. > 7 days | 7 | 2068 | 1.18 (0.98, 1.41) | No difference for short vs. long |
|   | Treatment failure at 90 days | >48 hours vs. > 7 days | 2 | 207 | 1.16 (0.65, 2.06) | No difference for short vs. long |
|   | Treatment failure at 30-45 days | >48 hours vs. > 7 days | 5 | 1861 | 1.18 (0.97, 1.43) | No difference for short vs. long |
|   | Treatment failure at 1 month or less (<2 years old) | >48 hours vs. > 7 days | 5 | 570 | 1.09 (0.76, 1.57) | No difference for short vs. long |
|   | Treatment failure at 1 month or less, >=2 years old | >48 hours vs. > 7 days | 6 | 1064 | 0.85 (0.60, 1.21) | No difference for short vs. long |
|   | Treatment failure at 1 mo or less, perforated eardrum | >48 hours vs. > 7 days | 1 | 27 | 3.62 (0.81, 16.06) | No difference for short vs. long |
|   | Treatment failure at 1 month or less | >48 hours vs. > 7 days | 1 | 101 | 1.06 (0.40, 2.75) | No difference for short vs. long |
|   | Treatment failure at 1 month or less, including chronic OM | >48 hours vs. > 7 days | 6 | 1713 | 1.37 (1.09, 1.72) | No difference for short vs. long |
|   | Treatment failure at 20-30 days | >48 hours vs. > 7 days | 5 | 1149 | 1.17 (0.89, 1.54) | No difference for short vs. long |
|   | Treatment failure at 1 month or less, excluding chronic OM | >48 hours vs. > 7 days | 4 | 1298 | 1.17 (0.73, 1.85) | No difference for short vs. long |
|   | Treatment failure at 20-30 days | >48 hours vs. > 7 days | 2 | 656 | 1.55 (0.79, 3.04) | No difference for short vs. long |
|   | Treatment failure at 1 mo or less, only if cured | >48 hours vs. > 7 days | 9 | 2955 | 1.31 (1.09, 1.58) | No difference for short vs. long |
|   | Treatment failure at 20-30 days | >48 hours vs. > 7 days | 6 | 1749 | 1.25 (0.98, 1.58) | No difference for short vs. long |
|   | Treatment failure at 1 mo or less, same abx in treatment arms | >48 hours vs. > 7 days | 9 | 3321 | 1.65 (1.35, 2.01) | No difference for short vs. long |
|   | Treatment failure at 8-19 days | >48 hours vs. > 7 days | 6 | 2153 | 1.97 (1.54, 2.52) | No difference for short vs. long |
|   | Treatment failure at 20-30 days | >48 hours vs. > 7 days | 4 | 1319 | 1.27 (0.92, 1.76) | No difference for short vs. long |
|   | Treatment failure at 3 months or less | >48 hours vs. > 7 days | 5 | 1492 | 1.24 (1.00, 1.53) | No difference for short vs. long |
|   | Treatment failure at 90 days  | >48 hours vs. > 7 days | 2 | 207 | 1.16 (0.65, 2.06) | No difference for short vs. long |
|   | Treatment failure at 30-45 days | >48 hours vs. > 7 days | 3 | 1285 | 1.25 (1.00, 1.57) | No difference for short vs. long |
|   | Adverse GI effects | >48 hours vs. > 7 days | 13 | 4918 | 0.72 (0.60, 0.87) | Short |
|  Urinary tract infection (Michael, 2010) | UTI at 1-3 months after treatment | 2-4 days (short) vs. 7-14 days (standard) | 6 | 269 | 0.83 (0.46, 1.47) | RR > 1 supports long course | No difference for short vs. long |
|   | UTI at 3-15 months after treatment  | 2-4 days (short) vs. 7-14 days (standard) | 4 | 238 | 1.05 (0.73, 1.52) | No difference for short vs. long |
|   | UTI at 1-15 months after treatment | 2-4 days (short) vs. 7-14 days (standard) | 10 | 507 | 0.95 (0.70, 1.29) | No difference for short vs. long |
|   | Persistence of bacteruria  | Sulphonamide containing abx shot vs. long | 4 | 289 | 0.80 (0.45, 1.41) | No difference for short vs. long |
|   | Other antibiotics | 4 | 137 | 1.72 (0.78, 3.80) | No difference for short vs. long |
|   | Recurrence of UTI | Sulphonamide containing abx shot vs. long | 5 | 327 | 0.96 (0.64, 1.44) | No difference for short vs. long |
|   |   | Other antibiotics | 4 | 143 | 0.93 (0.53, 1.61) | No difference for short vs. long |
|   | Recurrence of UTI: resistance to antibiotics | 2-4 days (short) vs. 7-14 days (standard) | 3 | 46 | 0.39 (0.12, 1.29) | No difference for short vs. long |

\* Only studies of individuals up to age 25 were included in the review, total review included 11 studies and 2, 750 patients.

**Supplementary Table 6. Adult results: secondary outcomes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Condition (Source systematic review)** | **Secondary Outcome** | **Definition of short vs long** | **Studies (#)** | **Patients (#)** | **Relative effect of short compared to long duration (95%CI)** | **Risk measure interpretation** | **Type of antibiotic course results support** |
| Acute bacterial sinusitis (Falagas 2008(b)) | Micro efficacy | 3-7 vs 6-10 | 3 | 511 | 1.30 (0.62, 2.74) | OR > 1 supports short course | No difference for short vs. long |
|  | Relapses | 3-7 vs 6-10 | 5 | 1396 | 0.95 (0.63, 1.42) | No difference for short vs. long |
|  | 5 vs 10 | 4 | 1344 | 0.91 (0.60, 1.37) | No difference for short vs. long |
|  | Adverse events | 3-7 vs 6-10 | 10 | 4172 | 0.88 (0.71, 1.09) | No difference for short vs. long |
|  | 5 vs 10 | 5 | 2151 | 0.79 (0.63, 0.98) | Short |
|  | Withdrawals due to Adverse events | 3-7 vs 6-10 | 11 | 4562 | 0.88 (0.61, 1.29) | No difference for short vs. long |
|  | 5 vs. 10 | 6 | 2541 | 1.02 (0.63-1.64) | No difference for short vs. long |
| Non-pregnant women with uncomplicated cystitis Katchman, 2005 | Bacteriological failure at 2 weeks  | 3 vs ≥5 | 20 | 4163 | 0.92 (0.82, 1.04) | RR >1 supports long course | No difference for short vs. long |
|  | Symptomatic failure at 8 weeks | 3 vs ≥5 | 10 | 3141 | 1.08 (0.99, 1.17) | No difference for short vs. long |
|  | Bacteriological failure at 8 weeks | 3 vs ≥5 | 13 | 2943 | 1.20 (1.06, 1.35) | Long |
|  | Risk of discontinuation of therapy | 3 vs ≥5 | NR | NR | 0.51 (0.36, 0.71) | Short |
|  | Adverse events | 3 vs ≥5 | NR | NR | 0.83 (0.79, 0.91) | Short |
| Acute pyelonephritisKyriakidou, 2008∫ |  |  |  |  |  |  |  |
| Community-acquired pneumonia Li, 2007α |  |  |  |  |  |  |  |
| Acute uncomplicated lower UTI in elderly women Lutters, 2008 | Bacteriological persistent UTI at 2 weeks  | 3-6 vs 7-14 | 3 | 431 | 0.85 (0.29, 2.47) | RR >1 supports long course | No difference for short vs. long |
|  | Bacteriological persistent UTI >2 weeks | 3-6 vs 7-14 | 3 | 470 | 0.85 (0.54, 1.32) | No difference for short vs. long |
|  | Discontinuation due to adverse reactions | 3-6 vs 7-14 | 2 | 406 | 0.11 (0.01, 1.97) | No difference for short vs. long |
|  | Reinfection (long term) | 3-6 vs 7-14 | 2 | 405 | 1.30 (0.42, 4.01) | No difference for short vs. long |

∫ Insufficient data to include because only included 2 studies without IV antibiotic comparison.

α Insufficient data to include because only included 8 studies without IV antibiotic comparison.

NR = not reported