

Appendix Table 1. Search terms

Examples given are from MEDLINE (Ovid). Full strategies for other databases are available upon request.

Separate search strategies were devised for each of the drug classes. The structure of each strategy was as follows:

Exp Cardiovascular Diseases/

AND

Drug terms (all terms combined using OR)

AND

Terms for medication compliance (all terms combined using OR)

AND

Terms for study design for MEDLINE, EMBASE and PsycInfo (all terms combined using OR)

Search terms for Angiotensin Converting Enzyme Inhibitors

exp Angiotensin-Converting Enzyme Inhibitors/;Angiotensin Converting Enzyme inhibitor\$.tw.;

ACE inhibitor\$.tw.;Benazepril.af.;Captopril.af.;Enalapril.af.;Fosinopril.af.;

Lisinopril.af.;Moexipril.af.;Perindopril.af.;Quinapril.af.;Ramipril.af.;Trandolapril.af.

Search terms for Angiotensin Receptor Blockers

exp Receptors, Angiotensin/; (angiotensin adj3 receptor\$.tw.); Candesartan.af.; Eprosartan.af.;

Irbesartan.af.;Losartan.af.; Olmesartan.af.; Telmisartan.af.; Valsartan.af.

Search terms for Beta Blockers

exp Adrenergic beta-Antagonists/; beta blocker\$.tw.; Atenolol.af.; Bisoprolol.af.; Carvedilol.af.;
Propranolol.af.; Metoprolol.af.

Search terms for Calcium Channel Blockers

exp Calcium Channel Blockers/; calcium channel blocker\$.tw.; Amlodipine.af.; Diltiazem.af.;
Felodipine.af.; Isradipine.af.; Nifedipine.af.; Nimodipine.af.; Nisoldipine.af.

Search terms for Diuretics

exp Antihypertensive Agents/;(antihypertensive\$ or antihypertensiv\$).tw.Chlorothiazide.af.;
Chlorthalidone.af.;Hydrochlorothiazide.af.

Search terms for Alpha Blockers

exp Antihypertensive Agents/;(antihypertensive\$ or antihypertensiv\$).tw.
Clonidine.af.;Doxazosin.af.; Prazosin.af.;Terazosin.af.

Search terms for Medication Compliance

exp Patient Compliance/;(complan\$ or noncomplan\$ or (non adj complian\$) or comply or
complies or discontinu\$ or adher\$ or persist\$).tw.

Search terms for Study Design

exp Risk Factors/; risk\$.tw.;predict\$.tw.;determinant\$.tw.;associat\$.tw.;correlate\$.tw.;
randomized controlled trial.pt.;exp Randomized Controlled Trials/;controlled clinical trial.pt.;
Controlled Clinical Trials/;exp Cohort Studies/;random\$.tw.;control\$.tw.;cohort\$.tw.;
prospective\$.tw.;observational.tw.;retrospective.tw.;volunteer\$.tw.;group\$.tw.

Appendix 2. Checklist for determining study quality. Adapted from Peterson et al and Gwadry-Sridhar et al.^{1,2}

- Data sources have been described adequately
- Time frame for the data has been clearly stated
- Inclusion and exclusion criteria are clearly stated
- Duration of the study is appropriate for the objectives of the study
- For studies of adherence after initiating a new drug regimen: examination of the data from a sufficient pre-enrollment period to ensure that the subject was truly naïve to the drug
- For studies measuring compliance: used standard methods for calculating compliance such as mean possession ratio (MPR) or proportion of days covered (PDC), and researchers described how they handled values of adherence > 1; For studies measuring persistence: used standard methods with adequate justification when atypical methods were used
- Appropriate explanation of how researchers handled patients who switched drugs
- Cut-off point for defining compliance or persistence was appropriate and clearly defined (e.g. PDC >80%)
- Controlled for possible variables that may confound the association with adherence
- Disclose potential conflicts of interest

Maximum score of 10 points

References:

1. Gwadry-Sridhar FH, Manias E, Zhang Y et al. A framework for planning and critiquing medication compliance and persistence research using prospective study designs. *Clin Ther* 2009;31:421-35.
2. Peterson AM, Nau DP, Cramer JA, Benner J, Gwadry-Sridhar F, Nichol M. A checklist for medication compliance and persistence studies using retrospective databases. *Value Health* 2007;10:3-12.