

Table S1 Search strategy

Search hits total: 6204

Unique search hits after removing duplicates: 4056

The first search was performed Sept 12 2008 and retrieved a total of 2323 unique references. The search was updated Feb 16 2009 (retrieving 323 additional references), Mar 16 2010 (retrieving 450 new references) and lastly May 10 2012 (retrieving 960 additional references). Search hits in each database are displayed below and the number includes hits from all searches added together.

British Nursing Index and Archive 1985 to March 2010

Date of last search: Mar 16 2010. As of May 2012 the British Nursing Index search was replaced by searching Cinahl.

Search hits: 46

1. medical order entry system*.tw.
2. computerized provider order entry.tw.
3. Care provider order entr*.tw.
4. ((Computerized or electronic* or digital*) adj order entr*).tw.
5. ((Computer* or electronic* or digital*) adj physician* order entr*).tw.
6. (CPOE or EPOE or POE).tw.
7. ((digital* or computer* or electronic*) adj3 order entr*).tw.
8. ((electronic* or computer* or digital*) adj3 prescri*).tw.
9. (e-prescri* or decision support).tw.
10. or/1-9
11. managment information systems/
12. exp management information systems/ or patients records/
13. exp technology in health care/
14. (((electronic* or digital or computer*) adj patient record*) or EPR).tw.
15. (((electronic* or digital or computer*) adj patient journal*) or EPJ).tw.
16. (((electronic* or digital or computer*) adj health record*) or EHR).tw.
17. (((computer* or digital or electronic*) adj medical record*) or EMR).tw.
18. decision support.tw.
19. or/11-18
20. (medicat* or order entr* or prescri*).tw.
21. prescribing/ or drug administration/
22. or/20-21
23. 19 and 22
24. 10 or 23
25. limit 24 to yr="1995 - 2010"
26. (review* or meta-analysis or medline).tw.
27. (randomized controlled trial or clinical trial or RCT or random*).tw.
28. (observational study or case control study or cohort study or pretest-posttest or time series or cross-sectional study or followup study or follow-up study or epidemiologic* study or longitudinal study or prospective study or retrospective study or comparative study).tw.
29. (qualitative or interview* or questionnaire* or focus group*).tw.
30. 25 and 26
31. 25 and 27
32. 25 and 28

33. 25 and 29
34. 33 or 32 or 30 or 31

Cinahl

Date of search: May 10 2012

Search hits: 10

The search was limited to publication date as of 2010. Previous searches were performed in British Nursing Index.

- S26 S6 and S16 and S24 Limiters - Exclude MEDLINE records. Published Date from: 20100101-20120531
- S25 S6 and S16 and S24
- S24 S17 or S18 or S19 or S20 or S21 or S22 or S23
- S23 TI qualitative OR AB qualitative
- S22 TI (study or trial or systematic review or meta-analysis) OR AB (study or trial or systematic review or meta-analysis)
- S21 (MH "Qualitative Studies+") OR (MH "Field Studies") OR (MH "Grounded Theory") OR (MH "Multimethod Studies")
- S20 (MH "Prospective Studies+") OR (MH "Concurrent Prospective Studies") OR (MH "Cross Sectional Studies") OR (MH "Nonexperimental Studies+") OR (MH "Experimental Studies+")
- S19 (MH "Randomized Controlled Trials") OR (MH "Clinical Trials+") OR (MH "Multicenter Studies") OR (MH "Intervention Trials") OR (MH "Nonrandomized Trials")
- S18 (MH "Meta Analysis")
- S17 (MH "Systematic Review")
- S16 S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15
- S15 TI (safety or error* or adverse event* or accident*) OR AB (safety or error* or adverse event* or accident*)
- S14 (MH "Patient Safety+")
- S13 (MH "Safety+")
- S12 (MH "Adverse Health Care Event+") OR (MH "Adverse Drug Event+")
- S11 (MH "Medication Errors") OR (MH "Health Care Errors+")
- S10 TI (ambulatory or out-patient* or outpatient or primary care or primary health care or primary healthcare or family physician* or general practic*) OR AB (ambulatory or out-patient* or outpatient or primary care or primary health care or primary healthcare or family physician* or general practic*)
- S9 (MH "Outpatients") OR (MH "Outpatient Service")
- S8 (MH "Ambulatory Care") OR (MH "Ambulatory Care Information Systems") OR (MH "Ambulatory Care Facilities+") OR (MH "Ambulatory Care Nursing")
- S7 (MH "Primary Health Care") OR (MH "Physicians, Family")
- S6 S1 or S2 or S3 or S4 or S5
- S5 TI e-prescri* OR AB e-prescri*
- S4 TI electronic* order entry OR AB electronic* order entry
- S3 (MH "Electronic Order Entry")
- S2 TI computer* order entry OR AB computer* order entry
- S1 TI electronic prescri* OR AB electronic prescri*

Cochrane Library

Date of last search: May 10 2012

Search hits: 533 (CDSR, HTA, DARE and CENTRAL total)

- #1 MeSH descriptor Medical Order Entry Systems explode all trees
- #2 MeSH descriptor Drug Therapy, Computer-Assisted explode all trees
- #3 "Computerized provider order entry":ti,ab,kw
- #4 "Care provider order entry":ti,ab,kw

#5 ((Computer* or electronic or digital) next "order entry"):ti,ab,kw
 #6 ((Computer* or electronic* or digital) next "physician order entry"):ti,ab,kw
 #7 (CPOE or EPOE or POE):ti,ab,kw
 #8 ((digital* or computer* or electronic*) near/3 "order entry"):ti,ab,kw
 #9 ((electronic* or computer* or digital*) near/3 prescri*):ti,ab,kw
 #10 e-prescri*:ti,ab,kw
 #11 (#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10)
 #12 MeSH descriptor Medication Systems explode all trees
 #13 MeSH descriptor Medical Informatics Applications explode all trees
 #14 "medical informatics":ti,ab,kw
 #15 MeSH descriptor Medical Informatics explode all trees
 #16 (((electronic* or digital or computer*) next (patient NEXT record*)) or EPR):ti,ab,kw
 #17 (((electronic* or digital or computer*) next (patient NEXT journal*)) or EPJ):ti,ab,kw
 #18 (((electronic* or digital or computer*) next (health NEXT record*)) or EHR):ti,ab,kw
 #19 MeSH descriptor Medical Records Systems, Computerized explode all trees
 #20 (((computer* or digital or electronic*) next (medical NEXT record*)) or EMR):ti,ab,kw
 #21 MeSH descriptor Decision Support Systems, Clinical explode all trees
 #22 MeSH descriptor Management Information Systems, this term only
 #23 MeSH descriptor Ambulatory Care Information Systems explode all trees
 #24 MeSH descriptor Clinical Pharmacy Information Systems explode all trees
 #25 MeSH descriptor Decision Support Systems, Management explode all trees
 #26 ("decision support"):ti,ab,kw
 #27 (#12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR
 #23 OR #24 OR #25 OR #26)
 #28 (medicat* or (order next entr*) or prescri*):ti,ab,kw
 #29 MeSH descriptor Prescriptions, Drug explode all trees
 #30 MeSH descriptor Medication Systems, this term only
 #31 (#28 OR #29 OR #30)
 #32 (#27 AND #31)
 #33 (#11 OR #32)
 #34 MeSH descriptor Ambulatory Care Information Systems explode all trees
 #35 MeSH descriptor Ambulatory Care explode all trees
 #36 MeSH descriptor Ambulatory Care Facilities explode all trees
 #37 MeSH descriptor Primary Health Care, this term only
 #38 MeSH descriptor Family Practice explode all trees
 #39 MeSH descriptor Physicians, Family explode all trees
 #40 (ambulator* or outpatient* or out-patient* or polyclinic* or (family next physician*) or
 (family next practi*) or (general next practi*) or (general next physician*) or (familiy next
 doctor*) or gp or (primary next health next care) or (primary next healthcare)):ti,ab,kw
 #41 MeSH descriptor Outpatients explode all trees
 #42 (#34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41)
 #43 (#33 AND #42)
 #44 MeSH descriptor Safety explode all trees
 #45 MeSH descriptor Medication Errors explode all trees
 #46 MeSH descriptor Accidents, this term only
 #47 MeSH descriptor Accident Prevention explode all trees
 #48 (safe* or error* or accident* or (adverse next drug next reaction*) or (adverse next reaction*)
 or (adverse next effect*) or (adverse next event*)):ti,ab,kw
 #49 (#44 OR #45 OR #46 OR #47 OR #48)
 #50 (#42 OR #49)
 #51 (#33 AND #50)
 #52 (#11 OR #21 OR #25)
 #53 MeSH descriptor Decision Making, Computer-Assisted, this term only
 #54 (#52 OR #53)
 #55 (#54 OR #32)

#56 (#55 AND #50)
 #57 (sr-epoc)
 #58 MeSH descriptor Information Systems explode all trees
 #59 (#57 AND #58)
 #60 (#51 OR #56 OR #59)
 #61 MeSH descriptor Electronic Prescribing explode all trees
 #62 (#60 OR #61)
 #62 (#62), from 1995 to 2012

CRD Databases (HTA, DARE)

Date of last search: May 10 2012

Search hits: 191

Publications published earlier than 1995 were excluded.

#107 MeSH DESCRIPTOR Medical Order Entry Systems EXPLODE ALL TREES
 #108 MeSH DESCRIPTOR Drug Therapy, Computer-Assisted EXPLODE ALL TREES
 #109 "Computerized provider order entry"
 #110 "computerized order entry" OR "digital order entry" OR "electronic order entry"
 #111 "computerized physician order entry" OR "digital order entry" OR "electronic order entry"
 #112 CPOE OR EPOE
 #113 "electronic prescription" OR "digital prescription" OR "computerized prescription"
 #114 e-prescription OR e-prescriptions
 #115 "e-prescription" OR "e-prescriptions"
 #116 #107 OR #108 OR #109 OR #110 OR #111 OR #112 OR #113 OR #115
 #117 MeSH DESCRIPTOR Electronic Prescribing EXPLODE ALL TREES
 #118 #107 OR #108 OR #109 OR #110 OR #111 OR #112 OR #113 OR #115 OR #117
 #119 MeSH DESCRIPTOR Medication Systems EXPLODE ALL TREES
 #120 MeSH DESCRIPTOR Medical Informatics Applications EXPLODE ALL TREES
 #121 "medical informatics"
 #122 MeSH DESCRIPTOR Medical Informatics EXPLODE ALL TREES
 #123 MeSH DESCRIPTOR undefined EXPLODE ALL TREES
 #124 MeSH DESCRIPTOR Decision Support Systems, Clinical EXPLODE ALL TREES
 #125 Clinical Pharmacy Information Systems
 #126 MeSH DESCRIPTOR Clinical Pharmacy Information Systems EXPLODE ALL TREES
 #127 MeSH DESCRIPTOR Decision Support Systems, Management EXPLODE ALL TREES
 #128 MeSH DESCRIPTOR Ambulatory Care Information Systems EXPLODE ALL TREES
 #129 #119 OR #120 OR #121 OR #122 OR #123 OR #124 OR #125 OR #126 OR #127 OR #128
 #130 (medication OR "order entry" OR prescription OR prescribing OR prescribe):TI
 #131 MeSH DESCRIPTOR Drug Prescriptions EXPLODE ALL TREES
 #132 MeSH DESCRIPTOR Medication Systems EXPLODE ALL TREES
 #133 MeSH DESCRIPTOR Prescriptions EXPLODE ALL TREES
 #134 #130 OR #131 OR #132 OR #133
 #135 #129 AND #134
 #136 #118 OR #135
 #137 MeSH DESCRIPTOR Ambulatory Care Information Systems EXPLODE ALL TREES
 #138 MeSH DESCRIPTOR Ambulatory Care EXPLODE ALL TREES
 #139 MeSH DESCRIPTOR Ambulatory Care Facilities EXPLODE ALL TREES
 #140 MeSH DESCRIPTOR Primary Health Care EXPLODE ALL TREES
 #141 MeSH DESCRIPTOR Family Practice EXPLODE ALL TREES
 #142 ambulator* or outpatient* or out-patient* or polyclinic* or family physician* or family practi*
 or general practi* or general physician* or family doctor* or gp or primary health care or
 primary healthcare or primary care
 #143 MeSH DESCRIPTOR Outpatients EXPLODE ALL TREES
 #144 MeSH DESCRIPTOR Safety EXPLODE ALL TREES
 #145 MeSH DESCRIPTOR Medication Errors EXPLODE ALL TREES

- #146 MeSH DESCRIPTOR Accidents EXPLODE ALL TREES
- #147 MeSH DESCRIPTOR Accident Prevention EXPLODE ALL TREES
- #148 safe* or error* or accident* or adverse drug reaction* or adverse reaction* or adverse effect* or adverse event*
- #149 #137 OR #138 OR #139 OR #140 OR #141 OR #142 OR #143 OR #144 OR #145 OR #146 OR #147 OR #148
- #150 #136 AND #149

ISI Social Science/Science Citation Index

Date of last search: May 10 2012

Search hits: 709

Lemmatization off. Databases=SCI-EXPANDED, SSCI Timespan=1995-01-01 - 2012-05-10

- #13 #12 AND #5
- #12 #11 AND #8
- #11 #10 OR #9
- #10 TS=(safe* or error* or "adverse drug reaction*" or "adverse reaction*" or "adverse effect*" or "adverse event*")
- #9 TS=(ambulator* or outpatient* or out-patient* or polyclinic* or "family physician*" or "family practi*" or "general practi*" or "general physician*" or "family doctor*" or "primary care" or "primary health*")
- #8 #7 OR #6
- #7 TS=("decision support" OR "electronic patient record" OR "electronic patient journal" OR "electronic health record*" OR "digital health record*" OR "computerized medical record*") AND TS=(prescri* or medication or "order entry")
- #6 TS=("medical order entry system*" or "Computerized provider order entr*" or "Care provider order entr*" or "Computerized order entry" or "digital order entry" or "Computerized physician order entr*" or CPOE or EPOE or "electronic prescription*" or "digital prescription*" or e-prescri*)
- #5 #4 OR #3 OR #2 OR #1
- #4 TS=("randomized controlled trial" or "clinical trial" or random*)
- #3 TS=(qualitative or interview* or questionnaire*)
- #2 TS=("observational study" or "cohort study" or "retrospective study" or "prospective study" or "case control study" or "pretest posttest" or "time series" or "longitudinal study" or "follow up study" or "cross sectional study")
- #1 TS=("systematic review" or "meta-analysis" or medline)

Ovid Embase 1980 to 2012 Week 21

Date of last search: May 10 2012

Search hits: 2256

The first search was limited to publication year as of 1995 with the field code "yr". The updating searhes were limited with the codes "em,yr".

Because of Embase's recent inclusion of all Medline records, and because of the exhaustive indexing practice in Embase (with Emtree), the last updated Embase-search performed in May 2012 was changed to a more precise search. Subject headings in line 1-33 were "focused" and some broad subject headings were removed or limited by excluding the "explode" function.

1. Computerized provider order entr*.tw.
2. Care provider order entr*.tw.
3. ((Computer* or electronic* or digital*) adj order entr*).tw.
4. ((Computer* or electronic* or digital*) adj physician* order entr*).tw.
5. (CPOE or EPOE or POE).tw.
6. ((digital* or computer* or electronic*) adj3 order entr*).tw.

7. ((electronic* or computer* or digital*) adj3 prescri*).tw.
8. (e-prescri* or ((electronic or computer*) adj2 reminder*)).tw.
9. or/1-8
10. *decision support system/ or decision support system*.tw.
11. (((electronic* or digital or computer*) adj patient record*) or EPR).tw.
12. (((electronic* or digital or computer*) adj patient journal*) or EPJ).tw.
13. (((electronic* or digital or computer*) adj health record*) or EHR).tw.
14. *electronic medical record/ or *medical information system/
15. ((computer* or digital or electronic*) adj medical record*).tw.
16. or/10-15
17. (order entr* or prescription* or prescrib* or medication system*).tw.
18. *prescription/
19. or/17-18
20. 16 and 19
21. 9 or 20
22. *ambulatory care/
23. *outpatient/
24. *outpatient Care/
25. *outpatient department/
26. *general practitioner/ or *general practice/ or *primary health care/
27. (ambulatory care or ambulatory health* or outpatient* or out-patient* or polyclinic* or family physician* or family practi* or general practi* or general physician* or family doctor* or primary health care or primary healthcare or primary care).tw.
28. or/22-27
29. *error/ or *safety/ or *patient safety/ or *accident/ or (safety or error* or accident* or adverse drug reaction\$ or adverse reaction\$ or adverse effect\$ or adverse event*).tw.
30. 28 or 29
31. 21 and 30
32. limit 31 to yr="1995 - 2012"
33. animal/ or Animal Experiment/ or Nonhuman/
34. Human/
35. 33 not 34
36. 32 not 35
37. Clinical Trial/ or Randomized Controlled Trial/ or random*.tw. or rct.tw.
38. Case control study/
39. comparative study/
40. Clinical study/ or controlled study/
41. pretest posttest control group design/ or pretest posttest design/ or exp Time Series Analysis/ or (pretest-posttest or time series).tw.
42. Longitudinal Study/
43. Observational Study/
44. Prospective Study/
45. Retrospective Study/
46. case control.tw.
47. cohort.tw.
48. (cross sectional adj2 study).tw.
49. (epidemiologic adj2 study).tw.
50. ((follow up or followup) adj2 study).tw.
51. (longitudinal adj2 study).tw.
52. (observational adj2 study).tw.
53. (prospective adj2 study).tw.
54. (retrospective adj2 study).tw.
55. or/38-54
56. (qualitative adj2 (research\$ or method\$ or approach\$ or study or studies or evaluation\$)).tw.
57. (ethnon\$ or ethnograph\$ or hermeneutic\$).tw.

58. (participant adj2 observ\$).tw.
59. constant compar\$.tw.
60. focus group\$.tw.
61. grounded theory.tw.
62. narrative analysis.tw.
63. ((lived or life) adj experience).tw.
64. theoretical sampl\$.tw.
65. phenomenolog\$.tw.
66. ((interview\$ or questionnaire\$) and study).tw.
67. ((systematic* adj2 review*) or meta-anal*).mp,pt. or (review* and (pubmed or medline)).tw.
68. or/56-67
69. 36 and (37 or 55 or 68)
70. (letter* or editorial* or comment*).pt.
71. 69 not 70

Ovid Medline In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Date of last search: May 10 2012

Search hits: 2297

The first search was limited to publication year as of 1995 with the field code "yr". The updating searches were limited with the codes "ed,ep,yr".

77. exp Medical Order Entry Systems/ or Electronic prescribing/
78. Drug Therapy, Computer-Assisted/
79. Computerized provider order entr*.tw.
80. Care provider order entr*.tw.
81. ((Computer* or electronic* or digital*) adj order entr*).tw.
82. ((Computer* or electronic* or digital*) adj physician* order entr*).tw.
83. (CPOE or EPOE or POE).tw.
84. ((digital* or computer* or electronic*) adj3 order entr*).tw.
85. ((electronic* or computer* or digital*) adj3 prescri*).tw.
86. e-prescri*.tw.
87. or/77-86
88. Medical Informatics Applications/
89. medical informatics.tw.
90. Medical Informatics/
91. (((electronic* or digital or computer*) adj patient record*) or EPR).tw.
92. (((electronic* or digital or computer*) adj patient journal*) or EPJ).tw.
93. (((electronic* or digital or computer*) adj health record*) or EHR).tw.
94. medical records systems, computerized/
95. (((computer* or digital or electronic*) adj medical record*) or EMR).tw.
96. decision support systems, clinical/ or ambulatory care information systems/ or clinical pharmacy information systems/ or decision support systems, management/ or Decision Making, Computer-Assisted/ or decision support system.tw.
97. or/88-96
98. (medication* or order entr* or prescription* or prescrib*).tw.
99. exp Prescriptions, Drug/ or exp Prescriptions/
100. Medication Systems/
101. or/98-100
102. 97 and 101
103. 87 or 102
104. Ambulatory Care Information Systems/
105. Ambulatory Care/
106. exp Ambulatory Care Facilities/

107. Primary Health Care/ or Family Practice/
108. Physicians, Family/
109. (ambulator* or outpatient* or out-patient* or polyclinic* or (family physician* or family practi*) or general practi* or general physician* or family doctor* or primary health care or primary healthcare or primary care).tw.
110. Outpatients/
111. or/104-110
112. exp Safety/ or exp Medication Errors/ or accidents/ or accident prevention/
113. (safety or error* or accident* or adverse drug reaction\$ or adverse reaction\$ or adverse effect\$ or adverse event*).tw.
114. 112 or 113
115. 111 or 114
116. 103 and 115
117. limit 116 to yr="1995 - 2012"
118. animals/ not humans/
119. 117 not 118
120. randomized controlled trial.pt.
121. controlled clinical trial.pt.
122. random*.tw.
123. rct.tw.
124. trial.ti.
125. or/120-124
126. exp case control studies/
127. exp cohort studies/
128. comparative study.pt.
129. (pretest-posttest or time series).tw.
130. Cross-sectional studies/
131. Epidemiologic studies/
132. case control.tw.
133. cohort.tw.
134. (cross sectional adj2 study).tw.
135. (epidemiologic adj2 study).tw.
136. ((follow up or followup) adj2 study).tw.
137. (longitudinal adj2 study).tw.
138. (observational adj2 study).tw.
139. (prospective adj2 study).tw.
140. (retrospective adj2 study).tw.
141. or/126-140
142. case reports.pt.
143. 141 not 142
144. Qualitative research/
145. (qualitative adj3 (research\$ or method\$ or approach\$ or study or studies or evaluation\$)).tw.
146. (ethnon\$ or ethnograph\$ or hermeneutic\$).tw.
147. (participant adj3 observ\$).tw.
148. constant compar\$.tw.
149. focus group\$.tw.
150. grounded theory.tw.
151. narrative analysis.tw.
152. ((lived or life) adj experience).tw.
153. theoretical sampl\$.tw.
154. phenomenolog\$.tw.
155. (interview\$ or questionnaire\$).tw.
156. ((systematic* adj2 review*) or meta-anal*).mp,pt. or (review* and (pubmed or medline or embase)).tw.
157. or/144-156

158. 119 and (125 or 143 or 157)
159. (letter* or editorial* or comment*).pt.
160. 158 not 159

Pubmed

Date of last search: May 10 2012

Search hits: 19

Pubmed was searched to identify literature that had not been indexed in Medline.

(electronic prescribing OR electronic prescription OR medical order entry systems OR e-prescrip*)
and (study OR "systematic review" OR meta-analysis OR trial) and (safety OR errors OR adverse
event OR ambulatory OR "primary care" OR "primary health care" OR outpatient) AND publisher
[sb]

SveMed

Date of last search: May 10 2012

Search hits: 143

All publications published earlier than 1995 were excluded.

S1 Explodesökning på Medical-Order Entry Systems
S2 Explodesökning på Drug-Therapy, Computer-Assisted
S3 CPOE or EPOE
S4 elektronisk\$ resept\$
S5 digital\$ resept\$
S6 e-resept\$
S7 S1 or S2 or S3 or S4 or S5 or S6
S8 Medication-Systems.fm.
S9 Explodesökning på Medical-Informatics Applications
S10 Explodesökning på Medical-Informatics
S11 epj or epr
S12 Explodesökning på Medical Records Systems, Computerized
S13 elektronisk\$ pasientjournal\$
S14 Explodesökning på Decision-Support Systems, Clinical
S15 Explodesökning på Decision-Support Systems, Management
S16 S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15
S17 Explodesökning på Medication-Systems
S18 Explodesökning på Drug-Prescriptions
S19 Explodesökning på Prescriptions
S20 resept\$ or medisiner
S21 S17 or S18 or S19 or S20
S22 S16 AND S21
S24 S7 or S22
S25 Explodesökning på Electronic prescriptions
S26 S24 or S25