

# Anexo 3. Estrategias de búsqueda de la literatura

## Estrategias de búsquedas iniciales

### 1. Guías de práctica clínica

Database: Ovid MEDLINE(R) without Revisions <1996 to October Week 1 2011>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <October 14, 2011>

Search Strategy:

- 1 \*Infusions, Intravenous/ (1217)
- 2 \*catheterization/ or \*catheterization, central venous/ or \*catheterization, peripheral/ (12263)
- 3 practice guideline.pt. (13457)
- 4 Guideline/ or Practice Guideline/ (16749)
- 5 \*Practice Guidelines as Topic/ (19047)
- 6 1 or 2 (13348)
- 7 3 or 4 or 5 (35495)
- 8 6 and 7 (136)
- 9 (intravenous or catheter\*).m\_titl. (38779)
- 10 (recommendation? or guidelines).m\_titl. (38270)
- 11 9 and 10 (191)
- 12 8 or 11 (293)
- 13 limit 12 to yr="2000 -Current" (243)

### EMBASE

Database: Embase <1996 to 2012 Week 27>

Search Strategy:

- 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ or central venous catheter/ or peripherally inserted central venous catheter/ or intravenous catheter/ (16469)
- 2 ((peripher\* or central\*) and catheter\*).ti. (4048)
- 3 1 or 2 (16926)
- 4 practice guideline/ (196678)
- 5 (recommendation? or guidelines).m\_titl. (55090)
- 6 4 or 5 (216252)
- 7 3 and 6 (881)
- 8 limit 7 to yr="2000 - Current" (770)
- 9 limit 8 to (catalan or english or french or italian or portuguese or spanish) (736)
- 10 limit 9 to embase (583)

RESULTADO: 583 DOCUMENTOS

## 2. Previa elección de la vía

### 2.1 Central periférica

Database: Ovid MEDLINE(R) without Revisions <1996 to February Week 1 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <February 10, 2012>, Ovid MEDLINE(R) Daily Update <February 10, 2012>

#### Search Strategy:

- 1 (peripher\* and central\* and catheter\*).ti. (337)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1312876)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (322487)
- 4 (1 and 2) not 3 (40)
- 5 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6438)
- 6 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2683)
- 7 5 and 6 (451)
- 8 (co or ep or pc).fs. (1706605)
- 9 7 and 8 (166)
- 10 4 or 9 (200)
- 11 limit 10 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)") (50)
- 12 10 not 11 (150)
- 13 limit 12 to (clinical trial, all or comparative study or meta analysis or multicenter study) (30)
- 14 (prospective\* or retrospective\*).sh. (539232)
- 15 Evidence-Based Medicine/ (44425)
- 16 research support\*.pt. (4067995)
- 17 12 and (14 or 15 or 16) (63)
- 18 13 or 17 (72)
- 19 4 or 18 (89)

#### EMBASE (Interface embase.com)

```
peripher*:ti AND central*:ti AND catheter*:ti AND (effect*:ti OR outcome*:ti OR study:ti OR prevent*:ti OR trial:ti OR prophylaxis:ti OR assessment:ti) OR ('central venous catheterization'/mj OR 'central venous catheter'/mj AND ('vein catheterization'/mj OR 'peripherally inserted central venous catheter'/mj OR 'intravenous catheter'/mj)) AND ([adult]/lim OR [aged]/lim) AND [embase]/lim AND [1996-2012]/py
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## 2.2 Multilumen

Database: Ovid MEDLINE(R) without Revisions <1996 to March Week 1 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <March 14, 2012>, Ovid MEDLINE(R) Daily Update <March 14, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3039)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1324256)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (324999)
- 4 (1 and 2) not 3 (482)
- 5 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6482)
- 6 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2703)
- 7 5 or 6 (8732)
- 8 (co or ep or pc).fs. (1720531)
- 9 7 and 8 (3135)
- 10 4 or 9 (3352)
- 11 limit 10 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)") (899)
- 12 10 not 11 (2453)
- 13 limit 12 to (clinical trial, all or comparative study or meta analysis or multicenter study) (524)
- 14 (prospective\* or retrospective\* or cohort\*).sh. (616899)
- 15 Evidence-Based Medicine/ (44769)
- 16 research support\*.pt. (4105530)
- 17 12 and (14 or 15 or 16) (877)
- 18 13 or 17 (1073)
- 19 4 or 18 (1299)
- 20 editorial.pt. (221525)
- 21 19 not 20 (1287)
- 22 limit 21 to (english or french or italian or portuguese or spanish) (1258)
- 23 (multilum\* adj3 catheter\*).mp. (54)
- 24 ((trilum\* or tri-lum\* or triplelum\* or triple-lum\* or multilum\* or multi-lum\*) adj3 catheter\*).mp. (188)
- 25 ((four-lum\* or fourlum\*) adj3 catheter\*).mp. (5)
- 26 ("3-lumen" or "3-luminal" or "4-lumen" or "4-luminal").mp. (46)
- 27 or/23-26 (237)
- 28 22 and 27 (38)

Database: Embase <1996 to 2012 Week 014>

Search Strategy:

```
#15 #14 AND [embase]/lim AND [1996-2012]/py 9
#14 #9 AND #13 12
#13 #11 OR #12 169
#12 (('tri lumen' OR 'tprotori luminal' OR '3 lumen' OR '3 luminal' OR 'four
lumen' OR 'four luminal' OR '4 lumen' OR '4 luminal')NEAR/3 catheter*):ab,ti 36
#11 ((trilum* OR triplelum* OR multilum*) NEAR/3 catheter*):ab,ti 134
#9 #7 AND #8 1,711
#8 'clinical trial (topic)'/exp OR 'prospective study'/exp OR 'retrospective
study'/exp OR 'comparative study'/exp OR 'multicenter study'/exp OR 'evidence
based medicine'/exp 1,821,610
#7 #4 OR #6 7,015
#6 #5 AND ([adult]/lim OR [aged]/lim) 6,500
#5 'central venous catheterization'/exp OR 'central venous catheter'/exp OR
'vein catheterization'/exp OR 'peripherally inserted central venous
catheter'/exp OR 'intravenous catheter'/exp 19,536
#4 #1 AND #2 NOT #3 784
#3 child*:ti OR infant*:ti OR neonat*:ti OR premature*:ti 867,792
#2 effect*:ti OR outcome*:ti OR study:ti OR prevent*:ti OR trial:ti OR
prophylaxis:ti OR assessment:ti 3,186,666
#1 peripher*:ti OR central*:ti AND catheter*:ti 5,848
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CINAHL

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S17 S10 and S15 23
S16 S10 and S15 36
S15 S11 or S12 or S13 or S14 88
S14 TI (4-lumen OR 3-lumen OR 3-luminal OR 4-luminal) OR AB (4-lumen OR 3-
lumen OR 3-luminal OR 4-luminal) 3
S13 TI ( 3-lum* or 4-lum* ) OR AB ( 3-lum* or 4-lum* ) AND ( TI (catheter*)
OR AB (catheter*) ) 3
S12 TI ( (four-lum* or fourlum*) AND catheter* ) OR AB ( (four-lum* or
fourlum*) AND catheter* ) 0
S11 TI ( (trilum* or tri-lum* or triplelum* or triple-lum* or multilum* or
multi-lum*) AND catheter* ) OR AB ( (trilum* or tri-lum* or triplelum*
or triple-lum* or multilum* or multi-lum*) AND catheter* ) 84
S10 PT S9 2174
S9 PT S7 NOT S8 2190
S8 PT EDITORIAL 130847
S7 (S4 OR S5) NOT S6 2196
S6 (MM "Child+") 15744
S5 (MM "Catheterization, Central Venous") OR (MM "Catheterization,
Peripheral") 2096
S4 (S1 AND S2) NOT S3 211
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S3 (child\* or infant\* or neonat\* or premature\*) 328314  
 S2 TI (effect\* or outcome\* or study or prevent\* or trial or prophylaxis or assessment) 301343  
 S1 TI ((peripher\* or central\*) and catheter\*) 1372

### 3. Revisiones Cochrane

#### 3.1 Actualización

Base de datos: Ovid MEDLINE(R) without Revisions <1996 to February Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <February 17, 2012>, Ovid MEDLINE(R) Daily Update <February 17, 2012>

Estrategia de búsqueda:

1 randomized controlled trial.pt. (223929)  
 2 controlled clinical trial.pt. (38072)  
 3 randomized controlled trial.sh. (223929)  
 4 random allocation.sh. (38321)  
 5 double blind method.sh. (68419)  
 6 single blind method.sh. (13102)  
 7 or/1-6 (309059)  
 8 clinical trial.pt. (265847)  
 9 exp clinical trial/ (457418)  
 10 (clin\$ adj25 trial\$).ti,ab. (168413)  
 11 ((singl\$ or doubl\$ or trebl\$ or tripl\$) adj25 (blind\$ or mask\$)).ti,ab. (72618)  
 12 placebos.sh. (12291)  
 13 placebo\$.ti,ab. (92429)  
 14 random\$.ti,ab. (449979)  
 15 research design.sh. (43276)  
 16 or/8-15 (869215)  
 17 7 or 16 (894794)  
 18 (animals not human).sh. (2313959)  
 19 17 not 18 (772142)  
 20 thromb\$.ti,ab. (160474)  
 21 fibrin\$.ti,ab. (37854)  
 22 occlu\$.ti,ab. (85570)  
 23 block\$.ti,ab. (322294)  
 24 stenosis\$.ti,ab. (57151)  
 25 infect\$.ti,ab. (656112)  
 26 or/20-25 (1233622)  
 27 (central adj5 venous).ti,ab. (10228)  
 28 cva\$.ti,ab. (1650)

29 (jugular\$ adj25 subclavian\$).ti,ab. (622)  
30 (jugular\$ adj25 femoral\$).ti,ab. (587)  
31 (subclavian adj25 femoral\$).ti,ab. (423)  
32 or/27-31 (12703)  
33 26 and 32 (5437)  
34 19 and 33 (972)  
35 limit 34 to (abstracts and yr="2007 -Current") (355)

Database: Embase <1996 to 2012 Week 07>

#### Search Strategy:

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1 random\$.ti,ab. (555041)  
2 placebo\$.ti,ab. (118195)  
3 ((singl\$ or doubl\$ or trebl\$ or tripl\$) adj25 (blind\$ or mask\$)).mp.  
(120972)  
4 (cross-over\$ or crossover\$).tw. (38868)  
5 randomized controlled trial/ (249463)  
6 phase-2-clinical-trial/ (26429)  
7 phase-3-clinical-trial/ (11440)  
8 double blind procedure/ (76569)  
9 single blind procedure/ (13406)  
10 crossover procedure/ (27550)  
11 latin square design/ (199)  
12 exp placebos/ (145279)  
13 multicenter study/ (77886)  
14 or/1-13 (785968)  
15 limit 14 to human (614817)  
16 thromb\$.ti,ab. (212534)  
17 fibrin\$.ti,ab. (47823)  
18 occlu\$.ti,ab. (106407)  
19 block\$.ti,ab. (386003)  
20 stenosis\$.ti,ab. (77088)  
21 infect\$.ti,ab. (793270)  
22 or/16-21 (1509844)  
23 (central adj5 venous).ti,ab. (13244)  
24 cva\$.ti,ab. (2603)  
25 (jugular\$ adj25 subclavian\$).ti,ab. (871)  
26 (jugular\$ adj25 femoral\$).ti,ab. (868)  
27 (subclavian adj25 femoral\$).ti,ab. (682)  
28 or/23-27 (17065)

- 29 22 and 28 (7506)
- 30 15 and 29 (772)
- 31 limit 30 to yr="2007 -Current" (322)
- 32 limit 31 to embase (277)

## CINAHL

- S16 S7 and S8 and S14 56
- S15 S7 and S8 and S14 62
- S14 S9 or S10 or S11 or S12 or S13 1330
- S13 TI SUBCLAVIAN\* AND FEMORAL\* 4
- S12 TI JUGULAR\* AND FEMORAL\* 9
- S11 TI JUGULAR\* AND SUBCLAVIAN\* 14
- S10 TI CVA\* 96
- S9 TI CENTRAL AND VENOUS 1220
- S8 TI THROM\* OR FIBRIN\* OR OCCLU\* OR BLOCK\* OR STENOS\* OR INFECT\* 57394
- S7 S1 or S2 or S3 or S4 or S5 or S6 208225
- S6 TI ALLOCATE\* 76
- S5 (MH "Meta Analysis") 11235
- S4 (MH "Random Assignment") 27068
- S3 (MH "Clinical Trials") OR (MH "Randomized Controlled Trials") 80737
- S2 (MH "Single-Blind Studies") OR (MH "Double-Blind Studies") OR (MH "Triple-Blind Studies") 21899
- S1 TI ( RANDOM\* OR CLIN\* OR TRIAL\* ) OR TI ( CLIN\* AND TRIAL\* ) 124857

## Búsquedas específicas por preguntas

### Planificación para inicio de terapia IV

#### MEDLINE

- 1 Catheterization, Central Venous/ae (4702)
- 2 Catheterization, Peripheral/ae (1388)
- 3 catheter- related mechanical complication.mp. (0)
- 4 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] (87637)
- 5 catheter related thrombosis.mp. (134)
- 6 venous thrombosis.mp. or exp Venous Thrombosis/ (26664)
- 7 1 or 2 (5799)
- 8 3 or 4 or 5 or 6 (112101)
- 9 Time Factors/ (459480)
- 10 7 and 8 and 9 (121)

- 11 editorial.pt. (223849)
- 12 10 not 11 (121)
- 13 limit 12 to (english or french or italian or portuguese or spanish) (112)

## EMBASE

- 1 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7946)
- 2 catheter- related mechanical complication.mp. (0)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (213258)
- 4 catheter related thrombosis.mp. (194)
- 5 venous thrombosis.mp. or exp vein thrombosis/ (57283)
- 6 time factors.mp. (540)
- 7 time/ (199708)
- 8 2 or 3 or 4 or 5 (260155)
- 9 6 or 7 (200120)
- 10 1 and 8 and 9 (54)
- 11 editorial.pt. (312550)
- 12 10 not 11 (54)
- 13 limit 12 to (embase and (english or french or italian or portuguese or spanish)) (21)

## Duración del tratamiento

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 24, 2012>, Ovid MEDLINE(R) Daily Update <May 24, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3090)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6608)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2749)
- 4 editorial.pt. (225960)
- 5 or/1-3 (9517)
- 6 5 not 4 (9334)
- 7 limit 6 to (english or french or italian or portuguese or spanish) (8859)
- 8 exp Catheters/ (9516)
- 9 7 and 8 (2109)
- 10 animals/ not human/ (1546603)



- 11 9 not 10 (2052)
- 12 ("short-term" or "long-term").m\_titl. (88735)
- 13 Time Factors/ (463266)
- 14 12 or 13 (529342)
- 15 11 and 14 (335)
- 16 exp Microbiological Techniques/ (125876)
- 17 15 not 16 (317)
- 18 limit 17 to comparative study (69)

Database: Embase <1996 to 2012 Week 20>

**Search Strategy:**

- 1 ((peripher\* or central\*) and catheter\*).ti. (3994)
- 2 \*central venous catheterization/ or \*vein catheterization/ or \*blood vessel catheterization/ or \*central venous catheter/ or \*peripherally inserted central venous catheter/ or \*intravenous catheter/ (6613)
- 3 1 or 2 (7467)
- 4 editorial.pt. (314941)
- 5 3 not 4 (7366)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (6819)
- 7 ("short-term" or "long-term").m\_titl. (114190)
- 8 time factors.mp. or \*time/ (2305)
- 9 7 or 8 (116466)
- 10 6 and 9 (248)
- 11 limit 10 to (embase) (16)

**pH y Osmolalidad**

Database: Ovid MEDLINE(R) without Revisions <1996 to March Week 4 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <April 09, 2012>, Ovid MEDLINE(R) Daily Update <April 09, 2012>

**Search Strategy:**

- 1 catheter\*.ab,ti,sh. (99181)
- 2 (peripher\* or central\*).ti. (88065)
- 3 Hydrogen-ion concentration/ or ph.ti. (102757)
- 4 osmolar concentration/ or osmola\*.ti. (16905)
- 5 1 and 2 (5217)
- 6 3 or 4 (116553)
- 7 5 and 6 (30)
- 8 limit 7 to (english or french or italian or portuguese or spanish) (30)

Database: Embase <1996 to 2012 Week 14>

#### Search Strategy:

- 1 "catheter\*".ti,sh,ab. (127529)
- 2 (peripher\* or central\*).ti. (109111)
- 3 ph/ or ph.ti. (127343)
- 4 osmolarity/ or osmola\*.ti. (7012)
- 5 1 and 2 (6102)
- 6 3 or 4 (133222)
- 7 5 and 6 (30)
- 8 limit 7 to (english or french or italian or portuguese or spanish) (30)
- 9 limit 8 to embase (27)

#### CINAHL

- S9 S3 and S8 12
- S8 S4 or S5 or S6 or S7 3320
- S7 TI osmola\* 100
- S6 (MH "Osmolar Concentration") 696
- S5 TI ph 686
- S4 (MH "Hydrogen-Ion Concentration")2452
- S3 (S1 or S2) 2938
- S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2126
- S1 TI ((peripher\* or central\*) and catheter\*) 1378

#### Entrenamiento

Database: Ovid MEDLINE(R) without Revisions <1996 to February Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <February 28, 2012>, Ovid MEDLINE(R) Daily Update <February 28, 2012>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3028)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1320755)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (324235)
- 4 (1 and 2) not 3 (479)
- 5 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6453)
- 6 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2692)
- 7 5 or 6 (8694)
- 8 (co or ep or pc).fs. (1713657)

9 7 and 8 (3114)  
 10 4 or 9 (3330)  
 11 limit 10 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)") (894)  
 12 10 not 11 (2436)  
 13 limit 12 to (clinical trial, all or comparative study or meta analysis or multicenter study) (520)  
 14 (prospective\* or retrospective\*).sh. (541799)  
 15 Evidence-Based Medicine/ (44599)  
 16 research support\*.pt. (4091431)  
 17 12 and (14 or 15 or 16) (849)  
 18 13 or 17 (1051)  
 19 4 or 18 (1279)  
 20 (training or coaching or practice or practicing).m\_titl. (102331)  
 21 19 and 20 (17)  
 22 \*education, nursing/ or \*education, nursing, continuing/ or \*education, nursing, graduate/ (13704)  
 23 exp \*education, medical/ or education, medical, continuing/ or education, medical, graduate/ or education, medical, undergraduate/ or "internship and residency"/ or teaching rounds/ (52803)  
 24 \*Clinical Competence/ (20248)  
 25 \*Health Knowledge, Attitudes, Practice/ (25770)  
 26 \*Patient Simulation/ (1247)  
 27 exp \*Teaching/ (20981)  
 28 \*Inservice Training/ (3866)  
 29 or/22-28 (118235)  
 30 19 and 29 (32)  
 31 21 or 30 (44)

Database: Embase <1996 to 2012 Week 14>

### Search Strategy:

```

#15 AND [embase]/lim AND [1996-2012]/py 11
#15 #10 AND #14      25
#14 #11 OR #12 OR #13      590,495
#13 'clinical competence'/exp OR 'attitude to health'/exp OR 'teaching'/exp
153,806
#12 'nursing education'/de OR 'medical education'/exp OR 'clinical
education'/exp OR 'residency education'/exp OR 'teaching round'/exp
290,867
#11 training:ti OR coaching:ti OR practice:ti OR practicing:ti      232,639
#10 #8 AND #9791
#9 'clinical trial (topic)'/exp OR 'prospective study'/de OR 'retrospective
study'/de OR 'comparative study'/exp OR 'multicenter study'/de OR
'evidence based medicine'/exp 1,815,760
  
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#8 #7 AND 'article'/it 2,704  
 #7 #4 OR #6 3,435  
 #6 #5 AND ([adult]/lim OR [aged]/lim) 2,881  
 #5 'central venous catheterization'/exp/mj OR 'central venous catheter'/exp/mj  
 OR 'vein catheterization'/exp/mj OR 'peripherally inserted central venous  
 catheter'/exp/mj OR 'intravenous catheter'/exp/mj 9,590  
 #4 #1 AND #2 NOT #3 783  
 #3 child\*:ti OR infant\*:ti OR neonat\*:ti OR premature\*:ti 866,122  
 #2 effect\*:ti OR outcome\*:ti OR study:ti OR prevent\*:ti OR trial:ti OR  
 prophylaxis:ti OR assessment:ti 3,179,313  
 #1 peripher\*:ti OR central\*:ti AND catheter\*:ti 5,829

## CINAHL

S16 S6 or S15 138  
 S15 S13 NOT S14 132  
 S14 (MM "Child+") 15706  
 S13 S11 and S12 133  
 S12 (MM "Catheterization, Central Venous") OR (MM "Catheterization,  
 Peripheral") 2096  
 S11 S5 or S6 or S7 or S8 or S9 or S10 127564  
 S10 (MM "Professional Knowledge+") 3542  
 S9 (MM "Teaching") OR (MM "Teaching Methods, Clinical") OR (MM "Patient  
 Simulation") OR (MM "Computer Simulation") OR (MM "Simulations") OR (MM  
 "Experiential Learning") 7020  
 S8 (MM "Clinical Competence") OR (MM "Nursing Skills") 8044  
 S7 (MM "Education, Medical+") OR (MM "Education, Nursing") OR (MM "Education,  
 Nursing, Continuing") OR (MM "Education, Nursing, Graduate") OR (MM  
 "Education, Nursing, Practical") 30878  
 S6 (S4 and S5) 9  
 S5 TI (training or coaching or practice or practicing) 87866  
 S4 (S1 AND S2) NOT S3 209  
 S3 (child\* or infant\* or neonat\* or premature\*) 327483  
 S2 TI (effect\* or outcome\* or study or prevent\* or trial or prophylaxis or  
 assessment) 300091  
 S1 TI ((peripher\* or central\*) and catheter\*) 1367

## MEDLINE

1 1 Catheterization, Central Venous/ae (4704)  
 2 Catheterization, Peripheral/ae (1388)  
 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or  
 pneumothorax or 'vessel injury').mp. [mp=title, abstract, original title,  
 name of substance word, subject heading word, protocol supplementary  
 concept, rare disease supplementary concept, unique identifier] (87683)  
 4 catheter related mechanical complication.mp. (0)  
 5 catheter related thrombosis.mp. (134)  
 6 venous thrombosis.mp. or exp Venous Thrombosis/ (26670)

- 7 1 or 2 (5801)
- 8 3 or 4 or 5 or 6 (112152)
- 9 Education, Medical/ (16225)
- 10 Clinical Competence/ (44350)
- 11 training programs.mp. (5490)
- 12 9 or 10 or 11 (63296)
- 13 7 and 8 and 12 (15)
- 14 editorial.pt. (223972)
- 15 13 not 14 (15)
- 16 limit 15 to (english or french or italian or portuguese or spanish) (15)

## EMBASE

- 1 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7946)
- 2 catheter related mechanical complication.mp. (0)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (213258)
- 4 catheter related thrombosis.mp. (194)
- 5 venous thrombosis.mp. or exp vein thrombosis/ (57283)
- 6 medical education/ (102706)
- 7 clinical competence/ (29905)
- 8 training programs.mp. (6995)
- 9 6 or 7 or 8 (132163)
- 10 2 or 3 or 4 or 5 (260155)
- 11 1 and 9 and 10 (29)

Database: Ovid MEDLINE(R) without Revisions <1996 to April Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <April 19, 2012>, Ovid MEDLINE(R) Daily Update <April 19, 2012>

### Search Strategy:

- 1 Catheterization, Central Venous/ae (4704)
- 2 Catheterization, Peripheral/ae (1388)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] (87683)
- 4 catheter related mechanical complication.mp. (0)
- 5 catheter related thrombosis.mp. (134)
- 6 venous thrombosis.mp. or exp Venous Thrombosis/ (26670)
- 7 1 or 2 (5801)
- 8 3 or 4 or 5 or 6 (112152)
- 9 Education, Medical/ (16225)

- 10 Clinical Competence/ (44350)
- 11 training programs.mp. (5490)
- 12 9 or 10 or 11 (63296)
- 13 7 and 8 and 12 (15)
- 14 editorial.pt. (223972)
- 15 13 not 14 (15)
- 16 limit 15 to (english or french or italian or portuguese or spanish) (15)

**Database: Embase <1996 to 2012 Week 15>**

**Search Strategy:**

- 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7946)
- 2 catheter related mechanical complication.mp. (0)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (213258)
- 4 catheter related thrombosis.mp. (194)
- 5 venous thrombosis.mp. or exp vein thrombosis/ (57283)
- 6 medical education/ (102706)
- 7 clinical competence/ (29905)
- 8 training programs.mp. (6995)
- 9 6 or 7 or 8 (132163)
- 10 2 or 3 or 4 or 5 (260155)
- 11 1 and 9 and 10 (29)

**CINAHL**

- S12 (S7 or S8 or S9 or S10) and (S3 and S6 and S11) 9
- S11 S7 or S8 or S9 or S10 61249
- S10 "training programs" 2638
- S9 (MH "Clinical Competence")15581
- S8 (MH "Education, Nursing, Practical") OR (MH "Education, Nursing, Continuing") OR (MH "Education, Nursing")33724
- S7 (MH "Education, Medical+") OR (MH "Education, Medical, Continuing")13160
- S6 S4 or S5 17716
- S5 (MH "Venous Thrombosis") OR (MH "Thrombosis") OR (MH "Catheter-Related Thrombosis") 7180
- S4 ( bleeding or haematoma or "misplaced catheter" or "arterial puncture" or pneumothorax or "vessel injury" ) OR "catheter related mechanical complication" 10902
- S3 S1 or S2 2947
- S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral")2133
- S1 TI ((peripher\* or central\*) and catheter\*)1381

## Protección pinchazos /seguridad

### MEDLINE

- 1 ((peripher\* or central\*) and catheter\*).ti. (3280)
- 2 Catheterization, Central Venous/ (8198)
- 3 Catheterization, Peripheral/ (3944)
- 4 1 or 2 or 3 (12014)
- 5 limit 4 to (english or french or italian or portuguese or spanish) (11397)
- 6 \*Needlestick Injuries/pc (735)
- 7 \*Accidents, Occupational/pc (1581)
- 8 6 or 7 (2190)
- 9 Needlestick.ti,ab. (864)
- 10 8 or 9 (2807)
- 11 4 and 10 (35)

### EMBASE

- 1 ((peripher\* or central\*) and catheter\*).ti. (4288)
- 2 \*central venous catheterization/ or \*vein catheterization/ or \*blood vessel catheterization/ or \*central venous catheter/ or \*peripherally inserted central venous catheter/ or \*intravenous catheter/ (7022)
- 3 1 or 2 (7941)
- 4 Needlestick.ti,ab. (971)
- 5 \*needlestick injury/ or \*occupational accident/ (6844)
- 6 occupational safety/ (7279)
- 7 4 or 5 or 6 (13769)
- 8 3 and 7 (20)

### CINHAL

- |  |        |
|--|--------|
| S8 (S4 OR S5 OR S6) AND (S3 AND S7)  | 23     |
| S7 S4 OR S5 OR S6  | 13,591 |
| S6 TI Needlestick OR AB Needlestick  | 890    |
| S5 (MH "Accidents, Occupational") OR MH Boolean/Phrase Search "Occupational Safety") | 12,151 |
| S4 (MM "Needlestick Injuries")   | 1,857  |
| S3 S1 OR S2  | 3,113  |
| S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral")      | 2,226  |
| S1 TI ((peripher* or central*) and catheter*)  | 1,480  |

## Elección del acceso venoso

Database: Ovid MEDLINE(R) without Revisions <1996 to April Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <April 20, 2012>, Ovid MEDLINE(R) Daily Update <April 20, 2012>

### Search Strategy:

- 1 Catheterization, Central Venous/ae (4704)
- 2 Catheterization, Peripheral/ae (1388)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] (87722)
- 4 catheter related mechanical complication.mp. (0)
- 5 catheter related thrombosis.mp. (134)
- 6 venous thrombosis.mp. or exp Venous Thrombosis/ (26675)
- 7 1 or 2 (5801)
- 8 3 or 4 or 5 or 6 (112196)
- 9 femoral vein/ or jugular veins/ or subclavian vein/ (7357)
- 10 (femoral or jugular or subclavian).ti. (17867)
- 11 9 or 10 (22427)
- 12 7 and 8 and 11 (277)
- 13 editorial.pt. (224163)
- 14 12 not 13 (275)
- 15 limit 14 to (english or french or italian or portuguese or spanish) (255)

Database: Embase <1996 to 2012 Week 16>

### Search Strategy:

- 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7960)
- 2 catheter related mechanical complication.mp. (0)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (213794)
- 4 catheter related thrombosis.mp. (194)
- 5 venous thrombosis.mp. or exp vein thrombosis/ (57411)
- 6 2 or 3 or 4 or 5 (260794)
- 7 1 and 6 (1585)
- 8 external jugular vein/ or femoral vein/ or internal jugular vein/ or jugular vein/ or leg vein/ or peripheral vein/ or subclavian vein/ (16246)
- 9 (femoral or jugular or subclavian).ti. (22036)
- 10 8 or 9 (34947)



- 11 7 and 10 (533)
- 12 editorial.pt. (313050)
- 13 11 not 12 (520)
- 14 limit 13 to (english or french or italian or portuguese or spanish) (466)
- 15 limit 14 to (embase and yr="1996 -Current") (403)

## CINAHL

- S12 S6 and S11 26
- S11 S7 or S8 or S9 or S10 14108
- S10 (MH "Thrombosis") OR (MH "Catheter- Related Thrombosis")3399
- S9 "catheter related thrombosis" 313
- S8 (bleeding or haematoma or "misplaced catheter" or "arterial puncture" or pneumothorax or "vessel injury") 10877
- S7 "catheter related mechanical complication" 0
- S6 (S1 or S2) and (S3 or S4) 310
- S5 S1 or S2 3798
- S4 TI femoral or jugular or subclavian 3008
- S3 (MH "Jugular Veins") OR (MH "Femoral Vein") OR (MH "Subclavian Vein")903
- S2 (MH "Catheterization, Peripheral Central Venous") OR (MH "Catheterization, Peripheral") OR (MH "Catheterization, Central Venous")3157
- S1 TI ((peripher\* or central\*) and catheter\*)1379

## Información al paciente

Database: Ovid MEDLINE(R) without Revisions <1996 to March Week 1 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <March 15, 2012>, Ovid MEDLINE(R) Daily Update <March 15, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3043)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1324783)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (325108)
- 4 (1 and 2) not 3 (482)
- 5 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6482)
- 6 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2703)
- 7 5 or 6 (8732)
- 8 (co or ep or pc).fs. (1720594)
- 9 7 and 8 (3135)
- 10 4 or 9 (3352)

11 limit 10 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)") (899)  
 12 10 not 11 (2453)  
 13 limit 12 to (clinical trial, all or comparative study or meta analysis or multicenter study) (524)  
 14 (prospective\* or retrospective\* or cohort\*).sh. (616918)  
 15 Evidence-Based Medicine/ (44772)  
 16 research support\*.pt. (4107583)  
 17 12 and (14 or 15 or 16) (877)  
 18 13 or 17 (1073)  
 19 4 or 18 (1299)  
 20 editorial.pt. (221642)  
 21 19 not 20 (1287)  
 22 limit 21 to (english or french or italian or portuguese or spanish) (1258)  
 23 Choice Behavior/ or Cooperative Behavior/ (34171)  
 24 communication/ or patient compliance/ (59619)  
 25 Informed Consent/ (16631)  
 26 Patient Education as Topic/ or Physician-Patient Relations/ (110186)  
 27 Nurse-Patient Relations/ (15379)  
 28 Patient Participation/ (11206)  
 29 Patient Preference/ (1161)  
 30 Personal Autonomy/ (6881)  
 31 Patient-Centered Care/ (7527)  
 32 Socioeconomic Factors/ (56811)  
 33 or/23-32 (278342)  
 34 22 and 33 (12)

Database: Embase <1996 to 2012 Week 16>

#### Search Strategy:

#17 #10 AND #16 56  
 #16 #11 OR #12 OR #13 OR #14 OR #15 752,666  
 #15 'doctor patient relation'/de OR 'nurse patient relationship'/de 101,785  
 #14 'patient education'/de 77,242  
 #13 'informed consent' 62,586  
 #12 'medical information' OR 'patient compliance' 145,062  
 #11 'decision making' OR 'cooperation' 429,631  
 #10 #9 AND ([article]/lim OR [article in press]/lim OR [conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim OR [letter]/lim OR [note]/lim OR [review]/lim OR [short survey]/lim) AND ([english]/lim OR [french]/lim OR [italian]/lim OR [portuguese]/lim OR [spanish]/lim) AND [embase]/lim AND [19962012]/py 1,317  
 #9 #7 AND #8 1,720

#8 'clinical trial (topic)'/exp OR 'prospective study'/exp OR 'retrospective study'/exp OR 'comparative study'/exp OR 'multicenter study'/exp OR 'evidence based medicine'/exp 1,830,329

#7 #4 OR #6 7,052

#6 #5 AND ([adult]/lim OR [aged]/lim) 6,535

#5 'central venous catheterization'/exp OR 'central venous catheter'/exp OR 'vein catheterization'/exp OR 'peripherally inserted central venous catheter'/exp OR 'intravenous catheter'/exp 19,646

#4 #1 AND #2 NOT #3 788

#3 child\*:ti OR infant\*:ti OR neonat\*:ti OR premature\*:ti 870,995

#2 effect\*:ti OR outcome\*:ti OR study:ti OR prevent\*:ti OR trial:ti OR 3,199,513

prophylaxis:ti OR assessment:ti

#1 peripher\*:ti OR central\*:ti AND catheter\*:ti 5,878

## CINAHL

S11 S6 and S10 42

S10 S7 or S8 or S9 74616

S9 TI patient preferences OR TI patient information OR Physician-Patient Relations OR Nurse-Patient Relations 30636

S8 MH Patient education OR MH Patient participation 35132

S7 MH Choice OR MH Patient compliance OR MH Informed consent 12998

S6 S4 or S5 2260

S5 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2126

S4 (S1 AND S2) NOT S3 235

S3 TI (child\* or infant\* or neonat\* or premature\*) 123479

S2 TI (effect\* or outcome\* or study or prevent\* or trial or prophylaxis or assessment) 303225

S1 TI ((peripher\* or central\*) and catheter\*) 1378

## Rasurado

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 22, 2012>, Ovid MEDLINE(R) Daily Update <May 22, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3089)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6599)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2747)
- 4 editorial.pt. (226073)
- 5 or/1-3 (9511)

- 6 5 not 4 (9328)
- 7 limit 6 to (english or french or italian or portuguese or spanish) (8853)
- 8 exp Hair Removal/ (836)
- 9 (shaving or shave or shaved or (hair adj2 removal) or depilat\*).m\_titl.  
(622)
- 10 8 or 9 (1085)
- 11 7 and 10 (3)

Database: Embase <1996 to 2012 Week 20>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3994)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel  
catheterization/ or central venous catheter/ or peripherally inserted  
central venous catheter/ or intravenous catheter/ (16206)
- 3 1 or 2 (16657)
- 4 editorial.pt. (314941)
- 5 3 not 4 (16333)
- 6 limit 5 to (english or french or italian or portuguese or spanish)  
(15347)
- 7 (shaving or shave or shaved or (hair adj2 removal) or depilat\*).ti,ab.  
(3236)
- 8 6 and 7 (5)
- 9 limit 8 to (human and embase) (3)

#### CINAHL

- S7 S3 and S6 3
- S6 S4 or S5 469
- S5 (MH "Hair Removal") 261
- S4 TI ( (shaving or shave or shaved or (hair removal) or depilat\* ) OR AB ( (shaving or shave or shaved or (hair removal) or depilat\* ) ) 299
- S3 S1 or S2 Display
- S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") Display
- S1 TI ((peripher\* or central\*) and catheter\*) Display

#### Anestesia local

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 23, 2012>, Ovid MEDLINE(R) Daily Update <May 23, 2012>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3085)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6602)

- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2749)
- 4 (co or ep or pc).fs. (1750669)
- 5 editorial.pt. (225841)
- 6 or/1-3 (9511)
- 7 (4 and 6) not 5 (3234)
- 8 limit 7 to (english or french or italian or portuguese or spanish) (3121)
- 9 exp Anesthetics, Local/ (35291)
- 10 exp Anesthesia, Local/ae, cl, ct, is, mt, mo, nu, st, td, ut [Adverse Effects, Classification, Contraindications, Instrumentation, Methods, Mortality, Nursing, Standards, Trends, Utilization] (2528)
- 11 9 or 10 (36367)
- 12 8 and 11 (73)
- 13 pain/ (58520)
- 14 12 and 13 (64)

Database: Embase <1996 to 2012 Week 20>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3994)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ or central venous catheter/ or peripherally inserted central venous catheter/ or intravenous catheter/ (16206)
- 3 1 or 2 (16657)
- 4 editorial.pt. (314941)
- 5 3 not 4 (16333)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (15347)
- 7 exp local anesthesia/ (16602)
- 8 exp local anesthetic agent/ (93985)
- 9 7 or 8 (102740)
- 10 6 and 9 (474)
- 11 pain/ (120280)
- 12 10 and 11 (94)

#### CINAHL

- S9 S7 and S8 22
- S8 (MH "Pain") 29665
- S7 S3 and S6 97
- S6 S4 or S5 7915
- S5 (MH "Anesthetics, Local+") 7175
- S4 (MH "Anesthesia, Local") 1109
- S3 S1 or S2 2976

S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2148

S1 TI ((peripher\* or central\*) and catheter\*) 1397

## Intentos

Database: Ovid MEDLINE(R) without Revisions <1996 to February Week 4 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <March 05, 2012>, Ovid MEDLINE(R) Daily Update <March 05, 2012>

### Search Strategy:

```
1 ((peripher* or central*) and catheter*).ti. (3027)
2 (effect* or outcome? or study or prevent* or trial or prophylaxis or
  assessment).ti. (1321656)
3 (child* or infant* or neonat* or premature?).ti. (324526)
4 (1 and 2) not 3 (479)
5 exp Catheterization, Central Venous/ (7647)
6 Catheterization, Peripheral/ (3670)
7 5 or 6 (10762)
8 limit 7 to "all adult (19 plus years)" (4972)
9 4 or 8 (5240)
10 attempts.ti,ab. (45661)
11 9 and 10 (158)
12 limit 11 to case reports (32)
13 11 not 12 (126)
```

Database: Embase <1996 to 2012 Week 10>

### Search Strategy:

```
#13 #11 NOT #12 103
#12 #11 AND ('case report'/de OR 'case study'/de) 32
#11 #10 AND [embase]/lim AND [1996-2012]/py 135
#10 #8 AND #9 181
#9 attempts:ab,ti 87991
#8 #7 AND 'article'/it 6322
#7 #4 OR #6 7941
#6 #5 AND ([adult]/lim OR [aged]/lim) 6487
#5 'central venous catheterization'/exp OR 'central venous catheter'/exp OR
  'vein catheterization'/exp OR 'peripherally inserted central venous
  catheter'/exp OR 'intravenous catheter'/exp 19486
#4 #1 AND #2 NOT #3 2234
#3 child*:ti OR infant*:ti OR neonat*:ti OR premature*:ti 866623
#2 effect*:ab,ti OR outcome*:ab,ti OR study:ab,ti OR prevent*:ab,ti OR
  trial:ab,ti OR prophylaxis:ab,ti OR assessment:ab,ti 9193172
#1 peripher*:ti OR central*:ti AND catheter*:ti 5833
```

## CINAHL

S11 Limitadores - Fecha en que se publicó desde: 19960101-20111231 56  
S10 S9 AND S8 60  
S9 TI ATTEMPTS OR AB ATTEMPTS 8231  
S8 S4 or S7 2211  
S7 S5 NOT S6 2074  
S6 (MM "Child+") 15739  
S5 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2096  
S4 (S1 AND S2) NOT S3 235  
S3 TI (child\* or infant\* or neonat\* or premature\*) 122707  
S2 TI (effect\* or outcome\* or study or prevent\* or trial or prophylaxis or assessment) 300998  
S1 TI ((peripher\* or central\*) and catheter\*) 1371

## Checklist

Database: Ovid MEDLINE(R) without Revisions <1996 to February Week 4 2012>,  
Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <March 01, 2012>,  
Ovid MEDLINE(R) Daily Update <March 01, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3025)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1319673)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (324045)
- 4 (1 and 2) not 3 (479)
- 5 exp Catheterization, Central Venous/ (7641)
- 6 Catheterization, Peripheral/ (3667)
- 7 5 or 6 (10755)
- 8 (co or ep or pc).fs. (1715082)
- 9 7 and 8 (3646)
- 10 4 or 9 (3844)
- 11 limit 10 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)") (1033)
- 12 10 not 11 (2811)
- 13 Checklist/ (946)
- 14 check?list?.ti,ab. (12451)
- 15 13 or 14 (12794)
- 16 12 and 15 (21)

Database: Embase <1996 to 2012 Week 8>

Search Strategy:

#12 #8 AND #11 7  
#11 #9 OR # 105,955  
#10 'checklist'/de 4,014  
#9 checklist?:ab,ti 2,548  
#8 #7 AND 'article'/it 6,320  
#7 #4 OR # 67,937  
#6 #5 AND ([adult]/lim OR [aged]/lim) 6,484  
#5 'central venous catheterization'/exp OR 'central venous catheter'/exp OR  
'vein catheterization'/exp OR 'peripherally inserted central venous  
catheter'/exp OR 'intravenous catheter'/exp 19,470  
#4 #1 AND #2 NOT # 32,233  
#3 child\*:ti OR infant\*:ti OR neonat\*:ti OR premature\*:ti 866,314  
#2 effect\*:ab,ti OR outcome\*:ab,ti OR study:ab,ti OR prevent\*:ab,ti OR  
trial:ab,ti OR prophylaxis:ab,ti OR assessment:ab,ti 9,187,809  
#1 peripher\*:ti OR central\*:ti AND catheter\*:ti 5,830

CINAHL

S8 S4 and S7 2  
S7 S5 or S6 11425  
S6 TI checklist\* OR AB checklist\* 5337  
S5 (MH "Checklists") 8184  
S4 (S1 AND S2) NOT S3 233  
S3 TI (child\* or infant\* or neonat\* or premature\*) 122419  
S2 TI (effect\* or outcome\* or study or prevent\* or trial or prophylaxis or  
assessment) 300091  
S1 TI ((peripher\* or central\*) and catheter\*) 1367

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid  
MEDLINE(R) In-Process & Other Non-Indexed Citations <May 21, 2012>, Ovid  
MEDLINE(R) Daily Update <May 21, 2012>

Search Strategy:

1 ((peripher\* or central\*) and catheter\*).ti. (3085)  
2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse  
Effects, Contraindications, Instrumentation, Methods, Nursing, Standards,  
Utilization] (6594)  
3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects,  
Contraindications, Instrumentation, Methods, Nursing, Standards,  
Utilization] (2746)  
4 (co or ep or pc).fs. (1749130)  
5 editorial.pt. (225882)  
6 or/1-3 (9503)  
7 (4 and 6) not 5 (3228)



- 8 limit 7 to (english or french or italian or portuguese or spanish) (3115)
- 9 Checklist/ (1040)
- 10 (bundle or checklist).mp. (28029)
- 11 9 or 10 (28029)
- 12 8 and 11 (47)

Database: Embase <1996 to 2012 Week 20>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3994)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ or central venous catheter/ or peripherally inserted central venous catheter/ or intravenous catheter/ (16206)
- 3 1 or 2 (16657)
- 4 editorial.pt. (314941)
- 5 3 not 4 (16333)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (15347)
- 7 checklist/ (4016)
- 8 (bundle or checklist).mp. (39599)
- 9 7 or 8 (39599)
- 10 6 and 9 (173)

#### CINAHL

- S7 S3 and S6 12
- S6 ("bundle") AND (S4 or S5) 2330
- S5 "bundle" 2330
- S4 (MH "Checklists") OR "checklist" 12461
- S3 S1 or S2 2976
- S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2148
- S1 TI ((peripher\* or central\*) and catheter\*) 1397

#### Protocolos

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 18, 2012>, Ovid MEDLINE(R) Daily Update <May 18, 2012>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3080)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6592)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2746)

4 (co or ep or pc).fs. (1748734)  
 5 editorial.pt. (225729)  
 6 or/1-3 (9497)  
 7 (4 and 6) not 5 (3227)  
 8 protocols.mp. or Clinical Protocols/ (134209)  
 9 7 and 8 (103)

Database: Embase <1996 to 2012 Week 20>

#### Search Strategy:

1 ((peripher\* or central\*) and catheter\*).ti. (3994)  
 2 central venous catheterization/ or vein catheterization/ or blood vessel  
 catheterization/ or central venous catheter/ or peripherally inserted  
 central venous catheter/ or intravenous catheter/ (16206)  
 3 1 or 2 (16657)  
 4 editorial.pt. (314941)  
 5 3 not 4 (16333)  
 6 limit 5 to (english or french or italian or portuguese or spanish)  
 (15347)  
 7 (co or ep or pc).fs. (1907544)  
 8 6 and 7 (6847)  
 9 protocol\*.ti. or \*nursing protocol/ or \*clinical protocol/ (22381)  
 10 8 and 9 (27)

#### CINAHL

S6 ((MH "Protocols") OR (MH "Nursing Protocols")) AND (S3 and S4) 48  
 S5 ((MH "Protocols") OR (MH "Nursing Protocols")) AND (S3 and S4) 55  
 S4 (MH "Protocols") OR (MH "Nursing Protocols") 8218  
 S3 S1 or S2 2971  
 S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization,  
 Peripheral") 2143  
 S1 TI ((peripher\* or central\*) and catheter\*) 1396

#### Localización de la punta

Database: Ovid MEDLINE(R) without Revisions <1996 to February Week 4 2012>,  
 Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <March 02, 2012>,  
 Ovid MEDLINE(R) Daily Update <March 02, 2012>

#### Search Strategy:

1 ((peripher\* or central\*) and catheter\*).ti. (3026)  
 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or  
 assessment).ti. (1320712)  
 3 (child\* or infant\* or neonat\* or premature?).ti. (324308)  
 4 (1 and 2) not 3 (479)  
 5 exp Catheterization, Central Venous/ (7646)

- 6 Catheterization, Peripheral/ (3670)
- 7 5 or 6 (10761)
- 8 4 or 7 (10826)
- 9 ((location or position\*) and tip).m\_titl. (94)
- 10 8 and 9 (23)

Database: Embase <1996 to 2012 Week 12>

**Search Strategy:**

- #9 #8 AND [embase]/lim AND [1996-2012]/py 32
- #8 #6 AND #7 41
- #7 location:ti OR position\*:ti AND tip:ti 181
- #6 #4 OR #5 9803
- #5 'central venous catheterization'/exp/mj OR 'central venous catheter'/exp/mj OR 'vein catheterization'/exp/mj OR 'peripherally inserted central venous catheter'/exp/mj OR 'intravenous catheter'/exp/mj 9595
- #4 #1 AND #2 NOT #3 783
- #3 child\*:ti OR infant\*:ti OR neonat\*:ti OR premature\*:ti 866410
- #2 effect\*:ti OR outcome\*:ti OR study:ti OR prevent\*:ti OR trial:ti OR prophylaxis:ti OR assessment:ti 3180706
- #1 peripher\*:ti OR central\*:ti AND catheter\*:ti 5831

**CINAHL**

- S8 S6 and S7 8
- S7 TI ((location or position\*) and tip) 36
- S6 S4 or S5 2231
- S5 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2096
- S4 (S1 AND S2) NOT S3 233
- S3 TI (child\* or infant\* or neonat\* or premature\*) 122419
- S2 TI (effect\* or outcome\* or study or prevent\* or trial or prophylaxis or assessment) 300091
- S1 TI ((peripher\* or central\*) and catheter\*) 1367

**Retroalimentación**

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 25, 2012>, Ovid MEDLINE(R) Daily Update <May 25, 2012>

**Search Strategy:**

- 1 ((peripher\* or central\*) and catheter\*).ti. (3090)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6609)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2749)
- 4 editorial.pt. (226134)

- 5 or/1-3 (9518)
- 6 5 not 4 (9335)
- 7 limit 6 to (english or french or italian or portuguese or spanish) (8859)
- 8 feedback.mp. or Feedback, Physiological/ or Feedback/ (57667)
- 9 7 and 8 (38)
- 10 \*Guideline Adherence/ (7475)
- 11 7 and 10 (29)
- 12 9 or 11 (63)

Database: Embase <1996 to 2012 Week 21>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3998)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ or central venous catheter/ or peripherally inserted central venous catheter/ or intravenous catheter/ (16244)
- 3 1 or 2 (16695)
- 4 editorial.pt. (315394)
- 5 3 not 4 (16371)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (15378)
- 7 feedback.mp. or feedback system/ (74608)
- 8 6 and 7 (84)
- 9 guideline adherence.mp. (876)
- 10 6 and 9 (3)
- 11 8 or 10 (85)

#### CINAHL

- S8 S5 or S7 17
- S7 (MM "Guideline Adherence") AND S3 2
- S6 (MM "Guideline Adherence") 1036
- S5 ((MH "Feedback") OR "FEEDBACK" ) AND S3 15
- S4 (MH "Feedback") OR "FEEDBACK" 10826
- S3 S1 or S2 2976
- S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2148
- S1 TI ((peripher\* or central\*) and catheter\*) 1397

## Prevención de complicaciones al canalizar la vía

### Programas institucionales de control de calidad

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 25, 2012>, Ovid MEDLINE(R) Daily Update <May 25, 2012>

- 1 1 Catheterization, Central Venous/ae (4707)

- 2 Catheterization, Peripheral/ae (1391)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. [mp=title, abstract, original title, name of substance word, subject heading word, protocol supplementary concept, rare disease supplementary concept, unique identifier] (88058)
- 4 catheter related mechanical complication.mp. (0)
- 5 catheter related thrombosis.mp. (136)
- 6 venous thrombosis.mp. or exp Venous Thrombosis/ (26728)
- 7 1 or 2 (5806)
- 8 3 or 4 or 5 or 6 (112581)
- 9 "outcome and process assessment (health care)"/ or "outcome assessment (health care)"/ or "process assessment (health care)"/ (51781)
- 10 7 and 8 and 9 (5)
- 11 Medical Audit/ or Clinical Audit/ or Nursing Audit/ (11622)
- 12 Quality Indicators, Health Care/ or Quality Control/ or Quality Assurance, Health Care/ or Total Quality Management/ or Quality Improvement/ (71430)
- 13 Registries/ (33696)
- 14 "\*outcome and process assessment (health care)"/ or "\*outcome assessment (health care)"/ or \*treatment outcome/ or "\*process assessment (health care)"/ (3477)
- 15 11 or 12 or 13 or 14 (117058)
- 16 7 and 8 and 15 (14)

Database: Embase <1996 to 2012 Week 21>

**Search Strategy:**

- 1 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7983)
- 2 catheter related mechanical complication.mp. (0)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. (214629)
- 4 catheter related thrombosis.mp. (194)
- 5 venous thrombosis.mp. or exp vein thrombosis/ (57537)
- 6 phlebitis/ or injection site phlebitis/ or thrombophlebitis/ (7357)
- 7 or/2-6 (264276)
- 8 treatment outcome/ or outcome assessment/ or outcomes research/ (766794)
- 9 process monitoring/ (1329)
- 10 total quality management/ or quality control/ (93989)
- 11 health care quality/ (128368)
- 12 medical audit/ (21896)
- 13 register/ (38924)
- 14 or/8-13 (1005798)
- 15 1 and 7 and 14 (228)
- 16 limit 15 to (embase and (english or french or italian or portuguese or spanish)) (175)

## CINAHL

S9 S3 and S7 Limiters - Published Date from: 19960101-20121231 151

S8 S3 and S7 160

S7 S4 or S5 or S6 81605

S6 (MH "Quality of Health Care") OR (MH "Quality Management, Organizational") OR (MH "Quality Assessment") OR (MH "Quality Improvement") OR (MH "Quality Assurance") OR (MH "Quality of Nursing Care") OR (MH "Evaluation and Quality Improvement Program") 62755

S5 (MH "Nursing Audit") OR (MH "Audit") 7909

S4 (MH "Process Assessment (Health Care)") OR (MH "Outcome Assessment") 15397

S3 S1 or S2 2954

S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2133

S1 TI ((peripher\* or central\*) and catheter\*) 1388

## Sujección

Database: Ovid MEDLINE(R) without Revisions <1996 to April Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <April 25, 2012>, Ovid MEDLINE(R) Daily Update <April 25, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3067)
- 2 Catheterization, Peripheral/ae (1388)
- 3 Catheterization, Central Venous/ae (4705)
- 4 1 or 2 or 3 (7092)
- 5 catheter related mechanical complication.mp. (0)
- 6 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. (87820)
- 7 catheter related thrombosis.mp. (135)
- 8 venous thrombosis.mp. or exp Venous Thrombosis/ (26695)
- 9 Catheter-Related Infections/pc (486)
- 10 Phlebitis/pc or Thrombophlebitis/pc (571)
- 11 or/5-10 (112877)
- 12 bandages/ or surgical tape/ (6589)
- 13 (bandages or dressing or 'surgical tape').ti,ab. (7005)
- 14 catheter securement devices.mp. (3)
- 15 catheter stabilization.mp. (0)
- 16 suture techniques.mp. (15777)
- 17 stiches.mp. (6)
- 18 Adhesives/ or Sutures/ (7126)
- 19 or/12-18 (32616)
- 20 4 and 11 and 19 (51)

- 21 editorial.pt. (224304)
- 22 20 not 21 (51)
- 23 limit 22 to (english or french or italian or portuguese or spanish) (50)

Database: Embase <1996 to 2012 Week 16>

**Search Strategy:**

- 1 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7960)
- 2 catheter related mechanical complication.mp. (0)
- 3 (bleeding or haematoma or 'misplaced catheter' or 'arterial puncture' or pneumothorax or 'vessel injury').mp. (213794)
- 4 catheter related thrombosis.mp. (194)
- 5 venous thrombosis.mp. or exp vein thrombosis/ (57411)
- 6 catheter infection/ (7244)
- 7 phlebitis/ or injection site phlebitis/ or thrombophlebitis/ (7345)
- 8 or/2-7 (269617)
- 9 "bandages and dressings"/ (143)
- 10 (bandages or dressing or 'surgical tape').ti,ab. (8957)
- 11 catheter securement devices.mp. (6)
- 12 catheter stabilization.mp. (0)
- 13 suture techniques.mp. (522)
- 14 stiches.mp. (28)
- 15 adhesive agent/ (4251)
- 16 suture/ (11715)
- 17 or/10-16 (25084)
- 18 1 and 8 and 17 (38)
- 19 editorial.pt. (313050)
- 20 18 not 19 (38)
- 21 limit 20 to (english or french or italian or portuguese or spanish) (36)

**Sellado**

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 21, 2012>, Ovid MEDLINE(R) Daily Update <May 21, 2012>

**1 Search Strategy:**

- 1 ((peripher\* or central\*) and catheter\*).ti. (3085)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6594)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2746)
- 4 (co or ep or pc).fs. (1749130)

- 5 editorial.pt. (225882)
- 6 or/1-3 (9503)
- 7 (4 and 6) not 5 (3228)
- 8 limit 7 to (english or french or italian or portuguese or spanish) (3115)
- 9 (cap or caps or plug or plugs or seal or sealed or (mechanical adj1 valve?) or "positive pressure").ti,ab. (41477)
- 10 8 and 9 (47)

Database: Embase <1996 to 2012 Week 20>

#### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3994)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ or central venous catheter/ or peripherally inserted central venous catheter/ or intravenous catheter/ (16206)
- 3 1 or 2 (16657)
- 4 editorial.pt. (314941)
- 5 3 not 4 (16333)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (15347)
- 7 (cap or caps or plug or plugs or seal or sealed or (mechanical adj1 valve?) or "positive pressure").ti,ab. (51741)
- 8 6 and 7 (132)
- 9 limit 8 to embase (118)

#### CINAHL

- S8 (S4 or S5 or S6) AND (S3 and S7) 27
- S7 S4 or S5 or S6 6218
- S6 TI positive pressure OR AB positive pressure 2719
- S5 TI ("mechanical valve" OR "mechanical valves" ) OR AB ( "mechanical valve" OR "mechanical valves" ) 94
- S4 TI (cap or caps or plug or plugs or seal or sealed ) OR AB ( cap or caps or plug or plugs or seal or sealed ) 3442
- S3 S1 or S2 2971
- S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2143
- S1 TI ((peripher\* or central\*) and catheter\*) 1396

#### Prevención de complicaciones en el mantenimiento de la vía

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 21, 2012>, Ovid MEDLINE(R) Daily Update <May 21, 2012>

- 1 1 ((peripher\* or central\*) and catheter\*).ti. (3070)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut (6559)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut (2734)
- 4 1 or 2 or 3 (9456)



5 (co or ep or pc or et).fs. (2111686)  
6 editorial.pt. (224682)  
7 (4 and 5) not 6 (5147)  
8 limit 7 to (english or french or italian or portuguese or spanish) (4906)  
9 exp Clinical Protocols/ (74765)  
10 (maintenance or replacement? or (best adj3 practice?) or patency or  
occlusion or thrombophlebitis or thrombosis or phlebitis).ti,ab. (341005)  
11 exp anti-infective agents, local/ or exp disinfectants/ (93123)  
12 Disinfection/mt or Equipment Contamination/pc (4869)  
13 skin.ti. (46971)  
14 exp Bandages/ or surgical tape/ or Surgical Drapes/ (9620)  
15 (bandages or dressing or 'surgical tape').ti,ab. (7016)  
16 or/9-15 (562970)  
17 8 and 16 (1725)  
18 exp Hemorrhage/pc [Prevention & Control] (10468)  
19 venous thrombosis.mp. or exp Venous Thrombosis/pc or Thrombosis/pc (26024)  
20 catheter related thrombosis.mp. (136)  
21 exp Catheter-Related Infections/pc [Prevention & Control] (488)  
22 18 or 19 or 20 or 21 (36677)  
23 17 and 22 (626)  
24 limit 23 to (clinical trial, all or comparative study or meta analysis or  
multicenter study) (152)  
25 (prospective\* or retrospective\* or cohort\*).sh. (625619)  
26 Evidence-Based Medicine/ (45315)  
27 research support\*.pt. (4165253)  
28 or/25-27 (4617188)  
29 23 and 28 (286)  
30 24 or 29 (332)

Database: Embase <1996 to 2012 Week 21>

#### Search Strategy:

1 1 ((peripher\* or central\*) and catheter\*).ti. (3963)  
2 'central venous catheterization'/ or 'central venous catheter'/ or 'vein  
catheterization'/ or 'peripherally inserted central venous catheter'/ or  
'intravenous catheter'/ (15600)  
3 1 or 2 (16049)  
4 editorial.pt. (314032)  
5 3 not 4 (15743)  
6 limit 5 to (english or french or italian or portuguese or spanish) (14783)  
7 (maintenance or replacement? or (best adj3 practice?) or patency or  
occlusion or thrombophlebitis or thrombosis or phlebitis).ti,ab. (444543)  
8 clinical protocol/ (54965)

- 9 topical antiinfective agent/ or disinfectant agent/ (8481)
- 10 skin decontamination/ (806)
- 11 ((skin or equip\*) and (decontamination or disinfection)).ti. (174)
- 12 exp "bandages and dressings"/ or surgical tape/ or surgical drape/ (18878)
- 13 or/7-12 (522482)
- 14 6 and 13 (3437)
- 15 limit 14 to (exclude medline journals and embase) (265)

## Actuación tras complicaciones al coger la vía o en su mantenimiento

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 21, 2012>, Ovid MEDLINE(R) Daily Update <May 21, 2012>

- 1 1 ((peripher\* or central\*) and catheter\*).ti. (3060)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1334959)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (327366)
- 4 (1 and 2) not 3 (487)
- 5 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6526)
- 6 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2716)
- 7 extravasation.ti. (975)
- 8 "Extravasation of Diagnostic and Therapeutic Materials"/ (1709)
- 9 7 or 8 (2203)
- 10 Phlebitis/co, dt, nu, pc, su, th [Complications, Drug Therapy, Nursing, Prevention & Control, Surgery, Therapy] (227)
- 11 Thrombophlebitis/co, dt, nu, pc, su, th [Complications, Drug Therapy, Nursing, Prevention & Control, Surgery, Therapy] (1679)
- 12 Thrombosis/co, dt, nu, pc, su, th or Venous Thrombosis/co, dt, nu, pc, su, th (19874)
- 13 (phlebitis or thrombophlebitis or thrombosis).ti. (18095)
- 14 10 or 11 or 12 or 13 (32510)
- 15 occlusion.ti. (11437)
- 16 9 or 14 or 15 (45795)
- 17 5 or 6 (8788)
- 18 limit 17 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)") (2256)
- 19 17 not 18 (6532)
- 20 limit 19 to (clinical trial, all or comparative study or meta analysis or multicenter study) (1061)
- 21 (prospective\* or retrospective\* or cohort\*).sh. or Evidence-Based Medicine/ or research support\*.pt. (4588492)

- 22 20 or (19 and 21) (2198)
- 23 limit 22 to (english or french or italian or portuguese or spanish) (2144)
- 24 editorial.pt. (223484)
- 25 23 not 24 (2130)
- 26 (4 or 25) and 16 (249)

Database: Embase <1996 to 2012 Week 21>

Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3915)
- 2 (effect\* or outcome? or study or prevent\* or trial or prophylaxis or assessment).ti. (1670650)
- 3 (child\* or infant\* or neonat\* or premature?).ti. (416851)
- 4 (1 and 2) not 3 (628)
- 5 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7939)
- 6 extravasation.ti. (1207)
- 7 drug extravasation/ or contrast medium extravasation/ or injection site extravasation/ (1738)
- 8 6 or 7 (2569)
- 9 (phlebitis or thrombophlebitis or thrombosis).ti. (24086)
- 10 phlebitis/ or injection site phlebitis/ or superficial thrombophlebitis/ or thrombophlebitis/ (7568)
- 11 thrombosis/ or catheter thrombosis/ or injection site thrombosis/ or vein thrombosis/ (71287)
- 12 9 or 10 or 11 (89056)
- 13 occlusion.ti. (14465)
- 14 8 or 12 or 13 (105379)
- 15 4 or 5 (8307)
- 16 14 and 15 (1302)
- 17 limit 16 to (embase and (english or french or italian or portuguese or spanish)) (896)
- 18 limit 17 to (evidence based medicine or concensus development or meta analysis or outcomes research or "systematic review") (58)
- 19 limit 17 to (clinical trial or randomized controlled trial or controlled clinical trial or multicenter study or phase 1 clinical trial or phase 2 clinical trial or phase 3 clinical trial or phase 4 clinical trial) (164)
- 20 18 or 19 (190)

CINAHL

- S1 TI ((peripher\* or central\*) and catheter\*)
- S2 TI ((effect\* or outcome\* or study or prevent\* or trial or prophylaxis or assessment
- S3 TI(child\* or infant\* or neonat\* or premature\*)
- S4 (S1 AND S2) NOT S3

S5 (MM "Catheterization central venous) or (MM "Catheterization peripheral")

S6 (MM Child\*)

S7 S5 NOT S6

S8 S4 OR S7

S9 TI extravasation

S10 (MH "Extravasation of diagnostic and therapeutics materials")

S11 S9 or S10

S12 TI (phlebitis or thrombophlebitis or thrombosis)

S13 (MH "Thrombophlebitis") or (MH "Venous thrombosis")

S14 (MH "Phlebitis")

S15 (MH "Catheter occlusion") or TI occlusion

S16 S11 or S12 or S13 or S14

S17 S8 and S16 (Limiters Published Date from: 19960101-20121231 Narrow by SubjectAge:Aged, 80 and over Narrow by SubjectAge: Adolescent: 13-18 years Narrow by SubjectAge: 65+ years Narrow by SubjectAge: Middle Aged: 45-64 years Narrow by SubjectAge: Adult: 19-44 years (33)

## Extravasación

Database: Ovid MEDLINE(R) without Revisions <1996 to April Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <April 24, 2012>, Ovid MEDLINE(R) Daily Update <April 24, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3069)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6546)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2725)
- 4 extravasation.ti. (983)
- 5 "Extravasation of Diagnostic and Therapeutic Materials"/ (1715)
- 6 editorial.pt. (224598)
- 7 1 or 2 or 3 (9440)
- 8 4 or 5 (2216)
- 9 (7 and 8) not 6 (120)

Database: Embase <1996 to 2012 Week 16>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3927)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ (7960)
- 3 extravasation.ti. (1212)

- 4 drug extravasation/ or contrast medium extravasation/ or injection site extravasation/ (1750)
- 5 1 or 2 (10067)
- 6 3 or 4 (2583)
- 7 5 and 6 (75)
- 8 limit 7 to (english or french or italian or portuguese or spanish) (69)

## Cuidados paliativos

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 3 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 24, 2012>, Ovid MEDLINE(R) Daily Update <May 24, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3090)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (6608)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut [Adverse Effects, Contraindications, Instrumentation, Methods, Nursing, Standards, Utilization] (2749)
- 4 editorial.pt. (225960)
- 5 or/1-3 (9517)
- 6 5 not 4 (9334)
- 7 limit 6 to (english or french or italian or portuguese or spanish) (8859)
- 8 Terminal Care/ or Palliative Care/ (31781)
- 9 7 and 8 (8)

Database: Embase <1996 to 2012 Week 20>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3994)
- 2 \*central venous catheterization/ or \*vein catheterization/ or \*blood vessel catheterization/ or \*central venous catheter/ or \*peripherally inserted central venous catheter/ or \*intravenous catheter/ (6613)
- 3 1 or 2 (7467)
- 4 editorial.pt. (314941)
- 5 3 not 4 (7366)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (6819)
- 7 terminal care/ or terminal disease/ (15687)
- 8 palliative nursing/ or cancer palliative therapy/ or palliative therapy/ (43831)
- 9 7 or 8 (54104)
- 10 6 and 9 (8)

## CINAHL

- S7 ((MH "Palliative Care")) AND (S4 or S5)) AND (S3 and S6) 2  
 S6 ((MH "Palliative Care")) AND (S4 or S5) 14960  
 S5 (MH "Palliative Care") 14960

S4 (MH "Terminally Ill Patients+") OR (MH "Terminal Care+") 33324  
S3 S1 or S2 2976  
S2 (MM "Catheterization, Central Venous") OR (MM "Catheterization, Peripheral") 2148  
S1 TI ((peripher\* or central\*) and catheter\*) 1397

## Toma de muestras

Database: Ovid MEDLINE(R) without Revisions <1996 to May Week 2 2012>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations <May 17, 2012>, Ovid MEDLINE(R) Daily Update <May 17, 2012>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3077)
- 2 Catheterization, Central Venous/ae, ct, is, mt, nu, st, ut (6586)
- 3 Catheterization, Peripheral/ae, ct, is, mt, nu, st, ut (2743)
- 4 1 or 2 or 3 (9488)
- 5 Blood Specimen Collection/ (4171)
- 6 (blood adj2 (sampl\* or collect\*)).ti,ab. (75701)
- 7 5 or 6 (78106)
- 8 4 and 7 (255)
- 9 editorial.pt. (225542)
- 10 8 not 9 (255)
- 11 limit 10 to (english or french or italian or portuguese or spanish) (242)
- 12 limit 11 to humans (211)

Database: Embase <1996 to 2012 Week 19>

### Search Strategy:

- 1 ((peripher\* or central\*) and catheter\*).ti. (3980)
- 2 central venous catheterization/ or vein catheterization/ or blood vessel catheterization/ or central venous catheter/ or peripherally inserted central venous catheter/ or intravenous catheter/ (16167)
- 3 1 or 2 (16612)
- 4 editorial.pt. (314474)
- 5 3 not 4 (16288)
- 6 limit 5 to (english or french or italian or portuguese or spanish) (15303)
- 7 (blood adj1 (sampl\* or collect\*)).ti. (2454)
- 8 \*blood sampling/ (2301)
- 9 7 or 8 (3801)
- 10 6 and 9 (95)
- 11 limit 10 to embase (60)