

Supplementary appendix 1

Row 1: Nudge-intervention terms

Decision Making, Computer-Assisted/ or Medical Records Systems, Computerized/ or Medical Order Entry Systems/ OR exp electronic health records/ OR Electronic Prescribing/ OR ((doctor* or GP or GPs or "general practitioner*" or registrar* OR intern* or medical or pharm* or radiolog* or physician* or patholog* or nurs*) adj3 (order* or form* or request* or prescri*)),tw. OR ((Medication* or test* or scan* or imaging or laboratory) adj2 (order* or form* or request*)),tw. OR medication alert system*.tw. OR electronic health record*.tw OR electronic medical record*.tw. OR default*.tw OR "accountable justification".tw OR "active choice" OR "public commitment" OR pre-commitment.tw OR medication system*.tw OR (computerized provider order entry or CPOE).tw OR electronic request form*.tw. OR nudge*.tw. OR "choice architecture".tw OR (behavi* adj1 economics).tw. OR (behavi* adj1 insight*).tw. OR nudging.tw. OR "Forms and Records Control"/

AND

Row 2: Overuse or underuse of health service terms

Clinical Laboratory Techniques/ OR Diagnostic Imaging/ OR "Quality of Health Care"/ OR deprescriptions/ OR (influence* adj2 decision*).tw. OR Choice Behavior/ OR ((inappropriate* or unnecessary! or misuse OR underuse OR overuse) adj3 (test* or screening OR imaging or prescri* or prescription* or laboratory)).tw. OR ((clinical or doctor* or physician* or nurs*) adj2 practice pattern*).tw. OR ((medication* or prescribing or prescription*) adj2 error*).tw. OR test ordering pattern*.tw. OR ((over or under or inappropriate) adj2 (prescri* or order*)),tw. OR Clinical Competence/ OR Unnecessary Procedures/ OR Inappropriate Prescribing/ OR exp Medication Errors/ OR health services misuse/ or medical overuse/ OR practice patterns, nurses'/ or practice patterns, physicians'/ OR Clinical Decision-Making/ OR practice guideline/

Example of Medline strategy:

(Decision Making, Computer-Assisted/ OR Medical Records Systems, Computerized/ OR Medical Order Entry Systems/ OR exp electronic health records/ OR Electronic Prescribing/ OR ((doctor* OR GP OR GPs OR general practitioner* OR registrar* OR intern* OR medical OR pharm* OR radiolog* OR physician* OR patholog* OR nurs*) ADJ3 (order* OR form* OR request* OR prescri*)),ti,ab. OR ((Medication* OR test* OR scan* OR imaging OR laboratory) ADJ2 (order* OR form* OR request*)),ti,ab. OR medication alert system*.ti,ab. OR electronic health record*.ti,ab. OR electronic medical record*.ti,ab. OR default*.ti,ab. OR accountable justification.ti,ab. OR active choice OR public commitment OR pre-commitment.ti,ab. OR medication system*.ti,ab. OR (computerized provider order entry OR CPOE).ti,ab. OR electronic request form*.ti,ab. OR nudge*.ti,ab. OR choice architecture.ti,ab. OR (behavi* ADJ1 economics).ti,ab. OR (behavi* ADJ1 insight*).ti,ab. OR nudging.ti,ab. OR Forms and Records Control/)

AND

(Clinical Laboratory Techniques/ OR Diagnostic Imaging/ OR Quality of Health Care/ OR deprescriptions/ OR (influence* ADJ2 decision*).ti,ab. OR Choice Behavior/ OR ((inappropriate* OR unnecessary! OR misuse OR underuse OR overuse) ADJ3 (test* OR screening OR imaging OR

prescrib* OR prescription* OR laboratory)).ti,ab. OR ((clinical OR doctor* OR physician* OR nurs*) ADJ2 practice pattern*).ti,ab. OR ((medication* OR prescribing OR prescription*) ADJ2 error*).ti,ab. OR test ordering pattern*.ti,ab. OR ((over OR under OR inappropriate) ADJ2 (prescrib* OR order*).ti,ab. OR Clinical Competence/ OR Unnecessary Procedures/ OR Inappropriate Prescribing/ OR exp Medication Errors/ OR health services misuse/ OR medical overuse/ OR practice patterns, nurses'/ OR practice patterns, physicians'/ OR Clinical Decision-Making/ OR practice guideline/)