

## SUPPLEMENTAL MATERIAL

### Search terms and strategy

Concept	Search terms	PubMed Search strategy (Translated from MEDLINE)	MEDLINE Search Strategy (1)	EMBASE Search strategy(2)
Exposure wide	Off-label use Appropriate indication Drug administration Drug prescription Drug utilization Drug approval Drug without guideline Dose-response relationship Dose sparing Fda non approved Fractional dose Immunization schedule improper inappropriate indication use Licensure Label labeled Labelling license licensed non evidence based outside prescribed Product monograph Reduced dose registered schedule unapproved unlabeled unlicensed used proper	((("Off-Label Use"[Mesh]) OR (off[tiab] AND (label[tiab] OR labelling[tiab]))) OR "reduced dose"[TIAB] OR "Unlabeled indication"[TIAB] OR "Unlabeled indications"[TIAB] OR "fractional dose"[TIAB] OR "fractional doses"[TIAB] OR "reduced doses"[TIAB] OR "Unlabeled indications"[TIAB] OR "dose sparing"[TIAB] OR (Off-label use[MH] OR (off[tiab] AND label[tiab]) OR "Off label use"[TIAB] OR Unapprove*[TIAB] OR unlicense*[TIAB] OR (label[tiab] AND indication*[TIAB]) OR ((no licensed[tiab] OR not licensed[tiab] OR no licenced[tiab] OR not licenced[tiab]) NOT (now licensed[tiab] OR now licenced[tiab]) AND (use [tiab] OR used [tiab]) OR usage [tiab])) OR ((appropriate*[tiab] AND prescri*[tiab]) and indication[tiab]) OR Off lisen[tiab] OR Off license[tiab] OR Off lisen[tiab] OR Off licence[tiab] OR nonapprove*[tiab] OR (unlabel*[tiab] AND (use[tiab] OR used[tiab])) OR (((inappropriate [tiab] AND (use[tiab] OR used[tiab])) AND indication[tiab]) NOT (antibiotic*[tiab] OR	((off adj2 label) or "Off label us*" or Unapprove* or unlicense* or (label adj3 indication*) or ((no* licen?ed for adj3 use*) not now licen?ed) or ((appropriate* adj3 prescri*) and indication) or Off li?en?e or nonapprove* or unlabel* us* or ((inappropriate us* and indication) not (antibiotic* or antimicrobial)) or unlabel* indication* or inappropriate indication* or labeled indication* or (outside adj2 licen?e*) or registered indication* or (out* adj4 licen?ed indication*) or non fda approve* or ((no* licen?ed for adj3 indication*) not now licen?ed) or (us* without adj2 indication*) or (appropriate indication adj3 us*) or non evidence base* us* or (improper adj1 indication*) or (be???d* adj2 licen?ed indication*) or out of label or without proper indication* or (prescri* outside adj4 guideline*) or no* appropriate indication* or (drug* without adj2 indication*) or (medication adj2 without adj2 indication*)).af. or off label*.ab,ti.	(off label*.af. OR (off adj1 label).mp. OR (drug adj2 label adj2 us*).af. OR unlicense*.af. OR unapprove*.af. OR (label adj3 indication*).af. OR off li?en?e*.af. OR ((no* licen?ed for adj3 use*) not now licen?ed).af. OR ((inappropriate us* and indication) not (antibiotic* or antimicrobial)).af. OR ((appropriate* adj3 prescri*) and indication).af. OR (outside adj3 licen?e*).af. OR unlabel* us*.af. OR labeled indication*.af. OR (inappropriate indication*).af. OR nonapprove*.af. OR registered indication*.af. OR offlabel*.af. OR (out* adj4 licen?ed indication*).af. OR (unlabel* adj3 indication*).af. OR non fda approve*.af. OR ((no* licen?ed for adj3 indication*) not now licen?ed).af. OR (appropriate indication adj3 us*).af. OR (be???d* adj2 licen?ed indication*).af. OR (us* without adj2 indication*).af. OR (prescri* outside adj4 guideline*).af. OR (out of label).af. OR (improper adj1 indication*).af. OR (inappropriate adj5 indication adj2 us*).af. OR no* appropriate indication*.af. OR (non evidence base* us*).af. OR without proper indication*.af.) OR (drug* without adj2 indication*).af.

		antimicrobial[TIAB])) OR unlabel* indication*[TIAB] OR inappropriate indication*[TIAB] OR labeled indication*[TIAB] OR (outside[TIAB] AND (licence*[TIAB] OR license*[TIAB])) OR registered indication*[TIAB] OR (outside[TIAB] AND (licenced indication*[TIAB] OR licensed indication*[TIAB])) OR non fda approve*[TIAB] OR (((not licenced for[TIAB] OR not licensed for[TIAB]) NOT (now licensed[TIAB] OR now licenced[TIAB])) AND indication*[TIAB] OR ((use[TIAB] OR used[TIAB] OR usage[TIAB]) AND without[TIAB]) AND indication*[TIAB] OR (appropriate indication[TIAB] AND (use[TIAB] OR used[TIAB] OR usage[TIAB])) OR (non evidence base* AND (use[TIAB] OR used[TIAB] OR usage[TIAB])) OR (improper[TIAB] AND indication*[TIAB] OR ((beyond [TIAB] OR beside*[TIAB]) AND (licensed indication*[TIAB] OR licenced indication*[TIAB])) OR out of label[TIAB] OR without proper indication*[TIAB] OR (prescri* outside[TIAB] AND guideline*[TIAB]) OR ((no[TIAB] OR not[TIAB]) AND appropriate indication*[TIAB]) OR (drug* without[TIAB] AND indication*[TIAB]) OR ((medication[TIAB] AND without[TIAB]) AND indication*[TIAB]) OR off label*[TIAB])		
--	--	---	--	--

		PubMed	MEDLINE (Translated from PubMed)	EMBASE (Translated from PubMed)
Exposure specific	Cholera vaccine Dengue vaccine Diphtheria vaccine HAV vaccine HBV vaccine HEV vaccine Hib vaccine HPV vaccine Influenza vaccine Japanese encephalitis vaccine Malaria vaccine Measles vaccine Meningococcal meningitis vaccine Mumps vaccine Pertussis vaccine Pneumococcal vaccine Poliovirus vaccine Rabies vaccine Rotavirus vaccine Rubella vaccine Tetanus vaccine Tick-borne encephalitis vaccine Tuberculosis vaccine Typhoid vaccine Varicella vaccine Yellow Fever vaccine Pandemic vaccine Epidemic vaccine Shortage vaccination	((("Cholera Vaccines"[Mesh] OR ((cholera OR cholerae) AND (vaccine OR vaccines) )) OR ("Dengue Vaccines"[Mesh] OR ((breakbone OR break-bone OR dengues OR dengue) AND (vaccine OR vaccines))) OR ("Diphtheria Toxoid"[Mesh] OR "Diphtheria-Tetanus Vaccine"[Mesh]) OR ((Diphtheria OR diphtheriae OR DT) AND (vaccine OR vaccines) )) OR ("Hepatitis A Vaccines"[Mesh] OR ("Viral Hepatitis Vaccines"[Mesh] AND "Hepatitis A"[Mesh]) OR ("viral vaccines"[Mesh] AND "Hepatitis A"[Mesh]) OR twinrix OR ((Hepatitis A OR HAV) AND (vaccine OR vaccines)) OR ((Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis A) AND (vaccine OR vaccines))) OR ((Hepatitis B Vaccines"[Mesh] OR ("Viral Hepatitis Vaccines"[Mesh] AND "Hepatitis B"[Mesh]) OR ("viral vaccines"[Mesh] AND "Hepatitis B"[Mesh]) OR twinrix OR ((Hepatitis B OR HBV) AND (vaccine OR vaccines)) OR "Hepatitis B Vaccines"[Mesh] OR ("Viral Hepatitis Vaccines"[Mesh] AND "Hepatitis B"[Mesh]) OR twinrix OR ((Hepatitis B OR HBV) AND (vaccine OR vaccines)) OR ((Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis B) AND (vaccine OR vaccines)) OR ((Hepatitis E vaccines or (Viral Hepatitis Vaccines and Hepatitis E) or (viral vaccines and Hepatitis E) or ((Hepatitis E virus or Hepatitis E or HEV) and (vaccine or vaccines)) or ((RNA Virus Infections or Hepatitis Viral Human or Hepatitis Viruses) and hepatitis E and (vaccine or vaccines))).af. OR (Haemophilus influenzae type b polysaccharide vaccine OR ((Haemophilus influenzae type b OR hib OR "Haemophilus	(Cholera Vaccines or ((cholera or cholerae) and (vaccine or vaccines))).af. OR (Dengue Vaccines or ((breakbone or break-bone or dengues or dengue) and (vaccine or vaccines))).af. OR (Diphtheria Toxoid or Diphtheria-Tetanus Vaccine or ((Diphtheria or diphtheriae or DT) and (vaccine or vaccines))).af. OR (Hepatitis A Vaccines OR (Viral Hepatitis Vaccines AND Hepatitis A) OR (viral vaccines AND Hepatitis A) OR twinrix OR ((Hepatitis A OR HAV) AND (vaccine OR vaccines)) OR ((Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis A) AND (vaccine OR vaccines))).af. OR (Hepatitis B Vaccines OR (Viral Hepatitis Vaccines AND Hepatitis B) OR (viral vaccines AND Hepatitis B) OR twinrix OR ((Hepatitis B OR HBV) AND (vaccine OR vaccines)) OR ((Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis B) AND (vaccine OR vaccines))).af. OR (Hepatitis E vaccines or (Viral Hepatitis Vaccines and Hepatitis E) or (viral vaccines and Hepatitis E) or ((Hepatitis E virus or Hepatitis E or HEV) and (vaccine or vaccines)) or ((RNA Virus Infections or Hepatitis Viral Human or Hepatitis Viruses) and hepatitis E and (vaccine or vaccines))).af. OR (Haemophilus influenzae type b polysaccharide vaccine OR ((Haemophilus influenzae type b OR hib OR "Haemophilus	(Cholera Vaccines OR ((cholera OR cholerae) and (vaccine or vaccines))).af. OR (Dengue Vaccines OR ((breakbone OR break-bone or dengues or dengue) and (vaccine or vaccines))).af. OR (Diphtheria Toxoid OR Diphtheria-Tetanus Vaccine OR ((Diphtheria OR diphtheriae OR DT) and (vaccine or vaccines))).af. OR (Hepatitis A Vaccines OR (Viral Hepatitis Vaccines AND Hepatitis A) OR (viral vaccines AND Hepatitis A) OR twinrix OR ((Hepatitis A OR HAV) AND (vaccine OR vaccines)) OR ((Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis A) AND (vaccine OR vaccines))).af. OR (Hepatitis B Vaccines OR (Viral Hepatitis Vaccines AND Hepatitis B) OR (viral vaccines AND Hepatitis B) OR twinrix OR ((Hepatitis B OR HBV) AND (vaccine OR vaccines)) OR ((Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis B) AND (vaccine OR vaccines))).af. OR (Hepatitis E vaccines OR (Viral Hepatitis Vaccines and Hepatitis E) OR (viral vaccines and Hepatitis E) OR ((Hepatitis E virus OR Hepatitis E OR HEV) and (vaccine OR vaccines)) OR ((RNA Virus Infections OR Hepatitis Viral Human OR Hepatitis Viruses) and hepatitis E and (vaccine OR vaccines))).af. OR

		<p>vaccines)) OR ((RNA Virus Infections OR Hepatitis Viral Human OR Hepatitis Viruses) AND (hepatitis E) AND (vaccine OR vaccines)) OR ("Haemophilus influenzae type b polysaccharide vaccine" [Supplementary Concept] OR ((hib OR "Haemophilus influenzae") AND (vaccine OR vaccines))) OR ("Papillomavirus Vaccines"[Mesh] OR ((hvp[tiab] OR Papillomavirus[tiab] OR Papilloma virus[tiab]) AND (vaccine OR vaccines))) OR ("Influenza Vaccines"[Mesh] OR ((flu OR influenza OR Influenza virus OR LAIV) AND (vaccine OR vaccines))) OR ("Japanese Encephalitis Vaccines"[Mesh] OR ((Japanese Encephalitis) AND (vaccine OR vaccines))) OR ("Malaria Vaccines"[Mesh] OR ((malarial OR malaria OR Remittent Fever OR Plasmodium Infection OR Marsh Fever OR Plasmodium Infections OR paludism) AND (vaccine OR vaccines))) OR ("Measles Vaccine"[Mesh] OR ((MMR OR rubeola OR morbilli OR Triviraten OR Priorix OR Trimovax OR Pluserix OR Virivac) AND (vaccine OR vaccines))) OR ("Meningococcal Vaccines"[Mesh] OR (Meningococcal Meningitis AND (vaccine OR vaccines))) OR ("Mumps Vaccine"[Mesh] OR "Measles-Mumps-Rubella Vaccine"[Mesh] OR ((mumps OR</p>	<p>influenzae") AND (vaccine OR vaccines))).af. OR (Papillomavirus Vaccines or ((hvp or Papillomavirus or Papilloma virus) and (vaccine or vaccines))).af. OR (Influenza Vaccines or ((flu or influenza or Influenza virus or LAIV) and (vaccine or vaccines))).af. OR (Japanese Encephalitis Vaccines or (Japanese Encephalitis and (vaccine or vaccines))).af. OR (Malaria Vaccines or ((malarial or malaria or Remittent Fever or Plasmodium Infection or Marsh Fever or Plasmodium Infections or paludism or Plasmodium falciparum) and (vaccine or vaccines))).af. OR ((Measles and (Vaccine or vaccines)) or ((MMR or rubeola or morbilli or Triviraten or Priorix or Trimovax or Pluserix or Virivac) and (vaccine or vaccines))).af. OR ((Meningococcal or Meningococcal Meningitis) and (vaccine or vaccines)).af. OR (Mumps Vaccine or Measles-Mumps-Rubella Vaccine OR ((mumps or Measles-Mumps-Rubella or Parotitis or Parotitides) and (vaccine or vaccines))).af. OR (Pertussis Vaccine or Diphtheria-Tetanus-Pertussis Vaccine or Diphtheria-Tetanus-acellular Pertussis Vaccines or ((DTaP or ACELIMUNE or Infanrix or dtwp or DPT or Di Te Per or Pertussis or Whooping Cough or bordetella) and (vaccine or vaccines))).af. OR (Pneumococcal Vaccines or</p>	<p>(Haemophilus influenzae type b polysaccharide vaccine OR ((Haemophilus influenzae type b OR hib OR "Haemophilus influenzae") AND (vaccine OR vaccines))).af. OR (Papillomavirus Vaccines OR ((hvp OR Papillomavirus OR Papilloma virus) and (vaccine OR vaccines))).af. OR (Influenza Vaccines OR ((flu OR influenza OR Influenza virus OR LAIV) and (vaccine OR vaccines))).af. OR (Japanese Encephalitis Vaccines OR (Japanese Encephalitis and (vaccine OR vaccines))).af. OR (Malaria Vaccines OR ((malarial OR malaria OR Remittent Fever OR Plasmodium Infection OR Marsh Fever OR Plasmodium Infections OR paludism OR Plasmodium falciparum) and (vaccine OR vaccines))).af. OR ((Measles and (Vaccine OR vaccines)) OR ((MMR OR rubeola OR morbilli OR Triviraten OR Priorix OR Trimovax OR Pluserix OR Virivac) and (vaccine OR vaccines))).af. OR ((Meningococcal OR Meningococcal Meningitis) and (vaccine OR vaccines)).af. OR (Mumps Vaccine OR Measles-Mumps-Rubella Vaccine OR ((mumps OR Measles-Mumps-Rubella OR Parotitis OR Parotitides) and (vaccine OR vaccines))).af. OR (Pertussis Vaccine OR Diphtheria-Tetanus-Pertussis Vaccine OR Diphtheria-Tetanus-acellular Pertussis Vaccines OR ((DTaP OR</p>
--	--	---	--	---

		<p>Parotitis OR Parotitides OR Measles-Mumps-Rubella) AND (vaccine OR vaccines))) OR  ("Pertussis Vaccine"[Mesh] OR "Diphtheria-Tetanus-Pertussis Vaccine"[Mesh] OR "Diphtheria-Tetanus-acellular Pertussis Vaccines"[Mesh] OR ((DTaP OR ACCEL IMUNE Tripedia OR ACELIMUNE OR Infanrix OR dtwp OR DPT OR Di Te Per OR Pertussis or Whooping Cough or bordetella) AND (vaccine OR vaccines))) OR  ("Pneumococcal Vaccines"[Mesh] OR ((Pneumococcal OR Pnu Imune OR Pnulmune OR Pneumovax OR PncOMPc OR PNCrM7 OR PCV7 OR PCV13 OR PCV10 OR Prevenar OR Pevnar or Pneumococcal Polysaccharide) AND (vaccine OR vaccines))) OR  ("Poliovirus Vaccines"[Mesh] OR ((Poliomyelitis or poliovirus OR Salk OR sabin OR Brunhilde OR Lansing OR Leon OR Polioviruses) AND (vaccine OR vaccines))) OR  ("Rabies Vaccines"[Mesh]OR ((rabies OR lyssa OR lyssas or rabies virus) AND (vaccine OR vaccines))) OR  ("Rotavirus Vaccines"[Mesh] OR ((rotavirus) AND (vaccine OR vaccines))) OR  ("Rubella Vaccine"[Mesh]OR (( Rubela OR rubelas or Rubella virus) AND (vaccine OR vaccines))) OR</p>	<p>((Pneumococcal or Pnu Imune or Pnulmune or Pneumovax or PncOMPc or PNCrM7 or PCV7 or PCV13 or PCV10 or Prevenar or Pevnar or Pneumococcal Polysaccharide) and (vaccine or vaccines))).af. OR (Poliovirus Vaccines or ((Poliomyelitis or poliovirus or Salk or sabin or Brunhilde or Lansing or Leon or Polioviruses) and (vaccine or vaccines))).af. OR (Rabies Vaccines or ((rabies or lyssa or lyssas or rabies virus) and (vaccine or vaccines))).af. OR (Rotavirus Vaccines or (rotavirus and (vaccine or vaccines))).af. OR (Rubella Vaccine or ((rubellas or Rubela or rubelas or Rubella virus) and (vaccine or vaccines))).af. OR (Tetanus Toxoid or ((tetatus or tetani) and (vaccine or vaccines))).af. OR (Encephalitis, Tick-Borne or (encephalitis and (tick borne or Russian Spring-Summer or Far Eastern Russian or Louping or Powassan or Central European) and (vaccine or vaccines))).af. OR (Tuberculosis Vaccines or ((tuberculosis or bcg or Calmette* or Kochs) and (vaccine or vaccines))).af. OR (typhoid vaccine or Ty21a typhoid vaccine or Typhoid-Paratyphoid Vaccines or ((typhoid or Paratyphoid or enteric or typhus or typhi or Typhoids or M01ZH09 or Typhoid fever) and (vaccine or vaccines))).af. OR ((varicella or Chickenpox or varivax) and (vaccine</p>	<p>ACEL IMUNE Tripedia OR ACELIMUNE OR Infanrix OR dtwp OR DPT OR Di Te Per OR Pertussis OR Whooping Cough OR bordetella) and (vaccine OR vaccines))).af. OR (Pneumococcal Vaccines OR ((Pneumococcal OR Pnu Imune OR Pnulmune OR Pneumovax OR PncOMPc OR PNCrM7 OR PCV7 OR PCV13 OR PCV10 OR Prevenar OR Pevnar OR Pneumococcal Polysaccharide) and (vaccine OR vaccines))).af. OR (Poliovirus Vaccines OR ((Poliomyelitis OR poliovirus OR Salk OR sabin OR Brunhilde OR Lansing OR Leon OR Polioviruses) and (vaccine OR vaccines))).af. OR (Rabies Vaccines OR ((rabies OR lyssa OR lyssas OR rabies virus) and (vaccine OR vaccines))).af. OR (Rotavirus Vaccines OR (rotavirus and (vaccine OR vaccines))).af. OR (Rubella Vaccine OR ((rubellas OR Rubela OR rubelas OR Rubella virus) and (vaccine OR vaccines))).af. OR (Tetanus Toxoid OR ((tetatus OR tetani) and (vaccine OR vaccines))).af. OR (Encephalitis, Tick-Borne OR (encephalitis and (tick borne OR Russian Spring-Summer OR Far Eastern Russian OR Louping OR Powassan OR Central European) and (vaccine OR vaccines))).af. OR (Tuberculosis Vaccines OR ((tuberculosis OR bcg OR Calmette*</p>
--	--	---	--	--

		<p>("Tetanus Toxoid"[Mesh] OR ((tetatus OR tetani) AND (vaccine OR vaccines))) OR ("Encephalitis, Tick-Borne"[Mesh] OR ( encephalitis AND (tick borne OR Russian Spring-Summer OR Far Eastern Russian OR Louping OR Powassan OR Central European) AND (vaccine OR vaccines))) OR ("Tuberculosis Vaccines"[Mesh] or ((tuberculosis or bcg or Calmette* OR Kochs) AND (vaccine OR vaccines))) OR ("typhoid vaccine M01ZH09" [Supplementary Concept] OR "Ty21a typhoid vaccine" [Supplementary Concept] OR "Typhoid-Paratyphoid Vaccines"[Mesh] OR ((typhoid OR Paratyphoid OR enteric OR typhus OR typhi OR Typhoids) AND (vaccine OR vaccines))) OR ("measles, mumps, rubella, varicella vaccine" [Supplementary Concept] OR "Chickenpox Vaccine"[Mesh] OR ((varicella OR Chickenpox OR varivax) AND (vaccine OR vaccines))) OR ("Yellow Fever Vaccine"[Mesh] OR ((yellow fever) AND (vaccine OR vaccines))) OR ("pandemics"[Mesh] OR "epidemics"[Mesh] AND (vaccine OR vaccines or vaccination)) OR Shortage vaccination)</p>	<p>or vaccines).af. OR ((Yellow Fever or yellow fever virus) and (vaccine or vaccines)).af. OR ((pandemics or epidemics) and (vaccine or vaccines or vaccination)).af. OR (Shortage vaccination).af.</p>	<p>OR Kochs) and (vaccine OR vaccines)).af. OR (typhoid vaccine OR Ty21a typhoid vaccine OR Typhoid-Paratyphoid Vaccines OR ((typhoid OR Paratyphoid OR enteric OR typhus OR typhi OR Typhoids OR M01ZH09 OR Typhoid fever) and (vaccine OR vaccines))).af. OR ((varicella OR Chickenpox OR varivax) and (vaccine OR vaccines)).af. OR ((Yellow Fever OR yellow fever virus) and (vaccine OR vaccines)).af. OR ((pandemics OR epidemics) and (vaccine OR vaccines OR vaccination)).af. OR (Shortage vaccination).af.</p>
--	--	---	--	--

1. Mesgarpour B, Muller M, Herkner H. Search strategies-identified reports on "off-label" drug use in MEDLINE. *J Clin Epidemiol.* 2012;65(8):827-34.
2. Mesgarpour B, Müller M, Herkner H. Search strategies to identify reports on "off-label" drug use in EMBASE. *BMC Med Res Methodol.* 2012;12(1):190.



**Databases used:**

PubMed: 1 January 1925 to 14 August 2020

MEDLINE: Ovid MEDLINE(R) ALL 1946 to August 14, 2020

EMBASE: Embase 1974 to 2020 August 14

**OvidSP MEDLINE Off-label High Sensitivity Search Strategy**

1. (off adj2 label).af.
2. "Off label us".af.
3. Unapprove\*.af.
4. unlicense\*.af.
5. (label adj3 indication\*).af.
6. ((no\* licen?ed for adj3 use\*) not now licen?ed).af.
7. ((appropriate\* adj3 prescri\*) and indication).af.
8. Off li?en?e.af.
9. nonapprove\*.af.
10. unlabel\* us\*.af.
11. ((inappropriate us\* and indication) not (antibiotic\* or antimicrobial)).af.
12. unlabel\* indication\*.af.
13. inappropriate indication\*.af.
14. labeled indication\*.af.
15. (outside adj2 licen?e\*).af.
16. registered indication\*.af.
17. (out\* adj4 licen?ed indication\*).af.
18. non fda approve\*.af.
19. ((no\* licen?ed for adj3 indication\*) not now licen?ed).af.
20. (us\* without adj2 indication\*).af.
21. (appropriate indication adj3 us\*).af.
22. non evidence base\* us\*.af.
23. (improper adj1 indication\*).af.
24. (be???d\* adj2 licen?ed indication\*).af.
25. out of label.af.
26. without proper indication\*.af.
27. (prescri\* outside adj4 guideline\*).af.
28. no\* appropriate indication\*.af.
29. (drug\* without adj2 indication\*).af.
30. (medication adj2 without adj2 indication\*).af.
31. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 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 or 27 or 28 or 29 or 30
32. off label\*.ab,ti.
33. 31 or 32