

Medline

Medline-Ovid Opioid Models July 6, 2018

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present> Search Strategy:

-
- 1 Computer Simulation/ or (((simulation* or model*) adj2 computer*) or "in silico?").ti,ab,kf,kw. (219680)
 - 2 models, theoretical/ or patient-specific modeling/ or models, statistical/ or likelihood functions/ or linear models/ or logistic models/ or models, spatial interaction/ or nomograms/ or proportional hazards models/ or nonlinear dynamics/ [set = selected models under MESH, Models, Theoretical/] (495641)
 - 3 ((theoretic* or mathematic* or experimental) adj2 (model* or simulat*)).ti,ab,kf. (146614)
 - 4 (discrete event system* or conceptual dynamic system* or system dynamic* or dynamical system or ((agent-based or "agent based" or computation* or discrete or discrete-time or dynamic* or mathematical or numerical or "SIR compartmental" or SIR or theoretical) adj2 (model* or simulation* or microsimulat* or micro-simulat*)) or discrete event system* or conceptual dynamic system* or system dynamic* or dynamical system*).ti,ab,kf. (184023)
 - 5 systems analysis/ or (systems adj2 (analys* or thinking* or medicine* or complexit*)).ti,ab,kf. or ((agent-based or "agent based") adj2 model*).ti,ab,kf. (13831)
 - 6 (model* or simulation* or microsimulat* or micro-simulat*).ti. (532477)
 - 7 ((computational* or mathematical* or numerical*) adj2 (biolog* or epidemiolog*)).ti,ab,kf. (4118)
 - 8 or/1-7 [model set] (1241510)
 - 9 opioid-related disorders/ or heroin dependence/ or morphine dependence/ or opium dependence/ (22860)
 - 10 analgesics, opioid/ or alfentanil/ or alphaprodine/ or buprenorphine/ or buprenorphine, naloxone drug combination/ or butorphanol/ or codeine/ or dextromoramide/ or dextropropoxyphene/ or dihydromorphine/ or diphenoxylate/ or "enkephalin, ala(2)-mephe(4)-gly(5)-"/ or "enkephalin, d-penicillamine (2,5)-"/ or ethylketocyclazocine/ or ethylmorphine/ or etorphine/ or fentanyl/ or heroin/ or hydrocodone/ or hydromorphone/ or levorphanol/ or meperidine/ or meptazinol/ or methadone/ or methadyl acetate/ or morphine/ or nalbuphine/ or opiate alkaloids/ or opium/ or oxycodone/ or oxymorphone/ or pentazocine/ or phenazocine/ or phenoperidine/ or piritramide/ or promedol/ or sufentanil/ or tilidine/ or tramadol/ (104637)
 - 11 exp Opiate Alkaloids/ or ("Opiate Alkaloids" or Morphinans or Benzomorphans or Pentazocine or Phenazocine or Buprenorphine or Butorphanol or Dextromethorphan or Dextrorphan or Diprenorphine or Etorphine or Levallorphan or Levorphanol or "Morphine Derivatives" or Codeine or Hydrocodone or Oxycodone or Dihydromorphine or Ethylmorphine or Heroin Hydromorphone or Morphine or Oxymorphone or Thebaine or Nalbuphine or Nalorphine or Naloxone or Naltrexone or Nalone or Naloxon or Narcan or Narcanti or Noscapine or Papaverine).ti,ab,kf. (107530)
 - 12 (opioid* or opiod* or opiate* or narcotic* or Alfentanil or algotan or Alphaprodine or beta-casomorphins or "beta casomorphins" or biopon or Buprenorphine or Butorphanol or carfentanil or Codeine or cofapon or dermorphin or desomorphine or Dextromoramide or Dextropropoxyphene or dezocine or dihydrocodeine or Dihydromorphine or Diphenoxylate or "endomorphin 1" or "endomorphin 2" or Enkephalin or eseroline or Ethylketocyclazocine or Ethylmorphine or Etorphine or Fentanyl or Heroin or Hydrocodone or Hydromorphone or ketobemidone or laudanum or laudanum or Levorphanol or lofentanil or Meperidine or Meptazinol or Methadone or "Methadyl Acetate" or Morphine or Nalbuphine or nepenthe or nocistatin or normethadone or omnopon or opial or "Opiate Alkaloid*" or Opium* or opon or oposal or Oxycodone or Oxymorphone or Pentazocine or Phenazocine or Phenoperidine or Piritramide or pantopon* or pavon or Promedol or protopine or remifentanil or Sufentanil or tetrapon or Tilidine or Tramadol).ti,ab,kf. (179621)
 - 13 or/10-12 [opioid set] (214156)
 - 14 (Pain adj2 (med or meds or medicine or medication* or killer* or drug* or drug therap*)).ti,ab,fs,kf,kw. [Pain meds set] (8264)
 - 15 narcotics/ or narcotic*.ti,ab. [narcotics set] (27355)
 - 16 Prescription Drug Misuse/ or Drug Monitoring/ or Prescription Drug Monitoring Programs/ or (drug adj2 monitoring).ti,ab,kf. or (prescription adj2 drug adj2 (misuse* or mis-use* or "non-medical use")).ti,ab,kf. or NMUPD.ti,ab,kf. or (abuse* or addict* or dependence* or misuse* or mis-use* or overdos* or epidemic* or pandemic*).ti,ab,kf,kw. (313533)

- 17 9 or (13 and 16) [opioids + abuse set] (41961)
- 18 (14 and 16) not 17 [pain meds + abuse set] (242)
- 19 (15 and 16) not (17 or 18) [narcotic abuse set] (425)
- 20 or/17-19 [All opioid, pain med or narcotic abuse set] (42628)
- 21 and/8,20 [models + opioid abuse set] (1465)
- 22 health policy/ or public policy/ or social control policies/ or organizational policy/ or policy/ or policy making/ or advisory committees/ or (policy or policies).ti. (139024)
- 23 ((health or healthcare or government* or public or social) adj2 (policy* or policies*)).ti,ab,kf. (52667)
- 24 or/22-23 [health policy set] (167437)
- 25 health planning/ or health planning organizations/ or health planning councils/ or "state health planning and development agencies"/ or (health adj2 planning).ti,ab,kf. [health planning set] (28292)
- 26 public health/ or (public health or community health).ti,ab,kf. [public health set] (265464)
- 27 21 and (or/24-26) [models + abuse + policy, planning,public health] (91)
- 28 (exp animals/ not humans/) or (animal? or beaver? or beef or bovine or breeding or canine or castoris or cat or cattle or cats or chicken? or cow or dog or dogs or equine or foal or foals or fish or livestock or mice or mouse or plant or plants or pork or porcine or protozoa? or purebred or rat or rats or rodent or rodents or sheep or thoroughbred).ti. or veterinar\$.ti,ab,kw,kf,hw. or insect\$.ti,ab,kw,kf. (4960075)
- 29 27 not 28 (87)
- 30 limit 29 to yr="2000 -Current" (73)
- 31 remove duplicates from 30 (73)

PsychINFO

PsychINFO (Ebscohost) July 9, 2018

#	Query	Results
S24	S7 AND S18 AND S22	Limiters - Publication Year: 2000-2018 20
S23	S7 AND S18 AND S22	23
S22	S19 OR S20 OR S21	318,260
S21	policy or policies or "public health"	316,781
S20	(DE "Public Health") OR (DE "Community Health")	23,296
S19	DE "Clinical Governance" OR DE "Health Care Policy" OR DE "Government Policy Making" OR DE "Policy Making"	46,122
S18	S8 OR S17	26,706
S17	S13 AND S16	26,706
S16	S14 OR S15	273,613
S15	DE "Drug Abuse" OR DE "Drug Addiction" OR DE "Drug Dependency" OR DE "Polydrug Abuse" OR DE "Drug Abuse Prevention" OR DE "Drug Usage Screening" OR DE "Substance Use Disorder" OR DE "Substance Abuse and Addiction Measures"	69,858
S14	drug N/2 monitoring) or (prescription N/2 drug N/2 (misuse* or mis-use* or "non-medical use")) or NMUPD or (abuse* or addict* or dependence* or misuse* or mis-use* or overdos* or epidemic* or pandemic*)	270,306
S13	S9 OR S10 OR S11 OR S12	51,709
S12	narcotic*	13,260

S11 DE "Analgesic Drugs" OR (Pain N/2 (med or meds or medicine* or medication* or killer* or drug* or "drug therap*")) 3,285

S10 Morphinans or Benzomorphans or Pentazocine or Phenazocine or Buprenorphine or Butorphanol or Dextromethorphan or Dextrorphan or Diprenorphine or Etorphine or Levallorphan or Levorphanol or "Morphine Derivatives" or Codeine or Hydrocodone or Oxycodone or Dihydromorphine or Ethylmorphine or Heroin Hydromorphone or Morphine or Oxymorphone or Thebaine or Nalbuphine or Nalorphine or Naloxone or Naltrexone or Nalone or Naloxon or Narcan or Narcanti or Noscapine or Papaverine or opioid* or opiod* or opiate* or narcotic* or Alfentanil or algoan or Alphaprodine or beta-casomorphins or "beta casomorphins" or biopon or Buprenorphine or Butorphanol or carfentanil or Codeine or cofapon or dermorphin or desomorphine or Dextromoramide or Dextropropoxyphene or dezocine or dihydrocodeine or Dihydromorphine or Diphenoxylate or "endomorphin 1" or "endomorphin 2" or Enkephalin or eseroline or Ethylketocyclazocine or Ethylmorphine or Etorphine or Fentanyl or Heroin or Hydrocodone or Hydromorphone or ketobemidone or laudanon or laudanum or Levorphanol or lofentanil or Meperidine or Meptazinol or Methadone or "Methadyl Acetate" or Morphine or Nalbuphine or nepenthe or nocistatin or normethadone or omnopon or opial or "Opiate Alkaloid*" or Opium* or opon or oposal or Oxycodone or Oxymorphone or Pentazocine or Phenazocine or Phenoperidine or Pirinitramide or pantopon* or pavon or Promedol or protopine or remifentanil or Sufentanil or tetrapon or Tilidine or Tramadol 50,313

S9 ((DE "Opiates" OR DE "Buprenorphine" OR DE "Codeine" OR DE "Endogenous Opiates" OR DE "Fentanyl" OR DE "Heroin" OR DE "Morphine" OR DE "Papaverine") AND (DE "Narcotic Drugs" OR DE "Apomorphine" OR DE "Atropine" OR DE "Meperidine" OR DE "Methadone" OR DE "Opiates" OR DE "Tramadol")) AND (DE "Narcotic Antagonists" OR DE "Nalorphine" OR DE "Naloxone" OR DE "Naltrexone") 2,746

S8 DE "Heroin Addiction" 2,501

S7 S1 OR S2 OR S3 OR S4 OR S5 OR S6 75,996

S6 systems N/2 (analys* or thinking* or medicine* or complexity) 8

S5 DE "Systems Analysis" 1,449

S4 ("discrete event system*" or "conceptual dynamic system*" or "system dynamic*" or "dynamical system" or ((agent-based or "agent based" or computation* or discrete or discrete-time or dynamic* or mathematical or numerical or "SIR compartmental" or SIR or theoretical) N/2 (model* or simulation* or microsimulat* or micro-simulat*))) 1,387

S3 ((theoretic* or mathematic* or experimental or computer*) N/2 (model* or simulat*)) 2

S2 simulation* or model*) N/2 computer*) or "in silico?" 52,627

S1 DE "Computer Simulation" OR DE "Computational Modeling" OR DE "Structural Equation Modeling" OR DE "Stochastic Modeling" OR DE "Markov Chains" OR DE "Mathematical Modeling" 36,402

Scopus

(TITLE-ABS-KEY (model* OR simulation* OR microsimulat* OR micro-simulat*)) OR (TITLE-ABS-KEY ("discrete event system*" OR "conceptual dynamic system*" OR "system dynamic*" OR "dynamical system" OR ((agent-based OR "agent based" OR computation* OR discrete OR discrete-time OR dynamic* OR mathematical OR numerical OR "SIR compartmental" OR sir OR theoretical) W/2 (model* OR simulation* OR microsimulat* OR micro-simulat*)))) OR (TITLE-ABS-KEY (systems W/2 (analys* OR thinking* OR medicine* OR complexity))) OR (TITLE-ABS-KEY ((computational* OR mathematical* OR numerical*) W/2 (biolog* OR epidemiolog*))) AND (TITLE-ABS-KEY ("Opiate Alkaloids" OR morphinans OR benzomorphans OR pentazocine OR phenazocine OR buprenorphine OR butorphanol OR dextromethorphan OR dextrorphan OR diprenorphine OR etorphine OR levallorphan OR levorphanol OR "Morphine Derivatives" OR codeine OR hydrocodone OR oxycodone OR dihydromorphine OR ethylmorphine OR heroin OR hydromorphone OR morphine OR oxymorphone OR thebaine OR nalbuphine OR nalorphine OR naloxone OR naltrexone OR nalone OR naloxon OR narcan OR narcanti OR noscapine OR papaverine OR opioid* OR opiod* OR opiate* OR narcotic* OR alfentanil OR algopan OR alphaprodine OR beta-casomorphins OR "beta casomorphins" OR biopon OR buprenorphine OR butorphanol OR carfentanil OR codeine OR cofapon OR dermorphin OR desomorphine OR dextromoramide OR dextropropoxyphene OR dezocine OR dihydrocodeine OR dihydromorphine OR diphenoxylate OR "endomorphin 1" OR "endomorphin 2" OR enkephalin OR eseroline OR ethylketocyclazocine OR ethylmorphine OR etorphine OR fentanyl OR heroin OR hydrocodone OR hydromorphone OR ketobemidone OR laudanon OR laudanum OR levorphanol OR lofentanil OR meperidine OR meptazinol OR methadone OR "Methadyl Acetate" OR morphine OR nalbuphine OR nepenthe OR nocistatin OR normethadone OR omnopon OR opial OR "Opiate Alkaloid*" OR opium* OR opon OR oposal OR oxycodone OR oxymorphone OR pentazocine OR phenazocine OR phenoperidine OR pirinitramide OR pantopon* OR pavon OR promedol OR protopine OR remifentanil OR sufentanil OR tetrapon OR tilidine OR tramadol) OR (TITLE-ABS-KEY (pain W/2 (med OR meds OR medicine* OR medication* OR killer* OR drug* OR drug AND therap*) OR narcotic*)) AND ((TITLE-ABS-KEY (drug W/2 monitoring)) OR (TITLE-ABS-KEY (prescription W/2 drug W/2 (misuse* OR mis-use* OR "non-medical use"))) OR (TITLE-ABS-KEY (nmupd)) OR (TITLE-ABS-KEY (abuse* OR addict* OR dependence* OR AND misuse* OR mis-use* OR overdos* OR epidemic* OR pandemic*))) AND (TITLE-ABS-KEY (policy* OR policies* OR "public health")) AND (PUBYEAR > 1999) AND (EXCLUDE (DOCTYPE , "cp "))

212 docs

Web of Science

Web of Science (Clarivate Analytics)

July 9, 2018

#	Results	Query
# 24	81	(#23 OR #14) AND DOCUMENT TYPES: (Article OR Abstract of Published Item OR Book OR Book Chapter OR Correction OR Correction, Addition OR Data Paper OR Letter OR Retracted Publication OR Review)
# 23	45	(#22) AND DOCUMENT TYPES: (Article OR Abstract of Published Item OR Book OR Book Chapter OR Correction OR Correction, Addition OR Data Paper OR Letter OR Retracted Publication OR Review)
# 22	45	#21 AND #19
# 21	670,843	TS=(policy* OR policies* OR "public health")
# 20	5	#19 AND #13
# 19	501	#18 AND #6
# 18	1,335,186	ti=((model* OR simulation* OR microsimulat* OR micro-simulat* OR "discrete event system*" OR "conceptual dynamic system*" OR "system dynamic*" OR "dynamical system" OR ((agent-based OR "agent based" OR computation* OR discrete OR discrete-time OR dynamic* OR mathematical OR numerical OR "SIR compartmental" OR sir OR theoretical) NEAR/2 (model* OR simulation* OR microsimulat* OR micro-simulat*)) OR (systems NEAR/2 (analys* OR thinking* OR medicine* OR complexity)) OR ((computational* OR mathematical* OR numerical*) NEAR/2 (biolog* OR epidemiolog*))))
# 17	164	#16 OR #14

16 131 #15 AND #11
15 133,257 TI=(((drug NEAR/2 monitoring) OR (prescription NEAR/2 drug NEAR/2 (misuse* OR mis-use* OR "non-medical use")) OR nmupd OR abuse* OR addict* OR dependence* OR AND misuse* OR mis-use* OR overdos* OR epidemic* OR pandemic*))

14 46 #13 AND #10
13 270,175 TI=(policy* OR policies* OR "public health")
12 379 (#8 AND #7) AND DOCUMENT TYPES: (Article OR Abstract of Published Item OR Correction OR Correction, Addition OR Data Paper OR Letter OR Proceedings Paper OR Retracted Publication OR Retraction)

11 381 (#8 AND #7) AND DOCUMENT TYPES: (Article OR Abstract of Published Item OR Book OR Book Chapter OR Correction OR Correction, Addition OR Data Paper OR Proceedings Paper OR Retracted Publication OR Retraction)

10 381 (#8 AND #7) AND DOCUMENT TYPES: (Article OR Abstract of Published Item OR Book OR Book Chapter OR Correction OR Correction, Addition OR Data Paper OR Letter OR Proceedings Paper OR Retracted Publication OR Retraction)

9 427 #8 AND #7
8 855,972 TS=(policy* OR policies* OR "public health")
7 4,551 #6 AND #1
6 35,604 #5 AND #4
5 372,991 TS=(((drug NEAR/2 monitoring) OR (prescription NEAR/2 drug NEAR/2 (misuse* OR mis-use* OR "non-medical use")) OR nmupd OR abuse* OR addict* OR dependence* OR AND misuse* OR mis-use* OR overdos* OR epidemic* OR pandemic*))

4 223,938 #3 OR #2
3 22,119 TS= (pain NEAR/2 (med OR meds OR medicine* OR medication* OR killer* OR drug* OR "drug therap*") OR narcotic*)

2 217,397 TS=("Opiate Alkaloids" OR morphinans OR benzomorphans OR pentazocine OR phenazocine OR buprenorphine OR butorphanol OR dextromethorphan OR dextrorphan OR diprenorphine OR etorphine OR levallorphan OR levorphanol OR "Morphine Derivatives" OR codeine OR hydrocodone OR oxycodone OR dihydromorphine OR ethylmorphine OR heroin OR hydromorphone OR morphine OR oxymorphone OR thebaine OR nalbuphine OR nalorphine OR naloxone OR naltrexone OR nalone OR naloxon OR narcan OR narcanti OR noscapine OR papaverine OR opioid* OR opiod* OR opiate* OR narcotic* OR alfentanil OR algopan OR alphaprodine OR beta-casomorphins OR "beta casomorphins" OR biopon OR buprenorphine OR butorphanol OR carfentanil OR codeine OR cofapon OR dermorphin OR desomorphine OR dextromoramide OR dextropropoxyphene OR dezocine OR dihydrocodeine OR dihydromorphine OR diphenoxylate OR "endomorphin 1" OR "endomorphin 2" OR enkephalin OR eseroline OR ethylketocyclazocine OR ethylmorphine OR etorphine OR fentanyl OR heroin OR hydrocodone OR hydromorphone OR ketobemidone OR laudanon OR laudanum OR levorphanol OR lofentanil OR meperidine OR meptazinol OR methadone OR "Methadyl Acetate" OR morphine OR nalbuphine OR nepenthe OR nocistatin OR normethadone OR omnopon OR opial OR "Opiate Alkaloid*" OR opium* OR opon OR oposal OR oxycodone OR oxymorphone OR pentazocine OR phenazocine OR phenoperidine OR piritramide OR pantopon* OR pavon OR promedol OR protopine OR remifentanil OR sufentanil OR tetrapon OR tilidine OR tramadol)

1 7,152,005 TOPIC: (model* OR simulation* OR microsimulat* OR micro-simulat* OR "discrete event system*" OR "conceptual dynamic system*" OR "system dynamic*" OR "dynamical system" OR ((agent-based OR "agent based" OR computation* OR discrete OR discrete-time OR dynamic* OR mathematical OR numerical OR "SIR compartmental" OR sir OR theoretical) NEAR/2 (model* OR simulation* OR microsimulat* OR micro-simulat*)) OR (systems NEAR/2 (analys* OR thinking* OR medicine* OR complexity)) OR ((computational* OR mathematical* OR numerical*) NEAR/2 (biolog* OR epidemiolog*)))

Embase

Embase –Ovid Opioid Modeling – Nasser

Database: Embase <1974 to 2018 July 03>

-
- 1 *simulation/ or *computer simulation/ or *disease simulation/ or *patient simulation/ or (((simulation* or model*) adj2 computer*) or "in silico?").ti,ab,kw. (108372)
 - 2 *computer model/ or *nonbiological model/ or *statistical model/ or *theoretical model/ or *mathematical model/ or *stochastic model/ or *markov chain/ or *proportional hazards model/ or *biological model/ or *model/ (212054)
 - 3 ((theoretic* or mathematic* or experimental) adj2 (model* or simulat*)).ti,ab,kw. (176671)
 - 4 (discrete event system* or conceptual dynamic system* or system dynamic* or dynamical system or ((agent-based or "agent based" or computation* or discrete or discrete-time or dynamic* or mathematical or numerical or "SIR compartmental" or SIR or theoretical) adj2 (model* or simulation* or microsimulat* or micro-simulat*)) or discrete event system* or conceptual dynamic system* or system dynamic* or dynamical system*).ti,ab,kw. (188205)
 - 5 *system analysis/ or (systems adj2 (analys* or thinking* or medicine* or complexit*)).ti,ab,kw. or ((agent-based or "agent based") adj2 model*).ti,ab,kw. (17229)
 - 6 *system analysis/ or (systems adj2 (analys* or thinking* or medicine* or complexit*)).ti,ab. or ((agent-based or "agent based") adj2 model*).ti,ab. (16634)
 - 7 (model* or simulation* or microsimulat* or micro-simulat*).ti. (667605)
 - 8 or/1-7 [model set] (1000810)
 - 9 opiate addiction/ or heroin dependence/ or morphine addiction/ or opiate addiction/ (25941)
 - 10 narcotic dependence/ (1246)
 - 11 *opiate/ or exp *morphine derivative/ or *opiate agonist/ (108601)
 - 12 (opioid* or opiod* or opiate* or narcotic* or Alfentanil or algozan or Alphaprodine or beta-casomorphins or Benzomorphans or "beta casomorphins" or biopon or Buprenorphine or Butorphanol or carfentanil or Codeine or cofapan or dermorphin or desomorphine or Dextromoramide or Dextromethorphan or Dextrophan or Dextropropoxyphene or dezocine or dihydrocodeine or Dihydromorphine or Diphenoxylate or Diprenorphine or Etorphine or "endomorphin 1" or "endomorphin 2" or Enkephalin or eseroline or Ethylketocyclazocine or Ethylmorphine or Etorphine or Fentanyl or Heroin or Hydrocodone or Hydromorphone or ketobemidone or laudanon or laudanum or Levallorphan or Levorphanol or lofentanil or Meperidine or Meptazinol or Methadone or "Methadyl Acetate" or Morphinans or Morphine or "Morphine Derivatives" or Nalbuphine or Nalorphine or Naloxone or Naltrexone or Nalone or Naloxon or Narcan or Narcanti or Noscapine nepenthe or nocistatin or normethadone or omnopon or opial or "Opiate Alkaloid*" or Opium* or opon or oposal or Oxycodone or Oxymorphone or Papaverine or paracy methadol or Pentazocine or Phenazocine or Phenoperidine or Pirinitramide or pantopon* or pavon or Promedol or protopine or remifentanil or Sufentanil or tetrapon or Thebaine or Tilidine or Tramadol).ti,ab,kw. (257322)
 - 13 or/11-12 [opioid set] (277932)
 - 14 (Pain adj2 (med or meds or medication* or killer* or drug* or drug therap*)).ti,ab,kw. [Pain meds set] (11899)
 - 15 *narcotic analgesic agent/ or exp *narcotic agent/ or (narcotics/ or narcotic*).ti,ab. [narcotics set] (133946)
 - 16 drug dependence/ or drug abuse pattern/ or drug craving/ or drug misuse/ or medication overuse/ or drug seeking behavior/ or (abuse* or addict* or dependence* or misuse* or mis-use* or overdos* or epidemic* or pandemic*).ti,ab,kw. [abuse set] (405041)
 - 17 9 or (13 and 16) [opioids + abuse set] (62260)
 - 18 (14 and 16) not 17 [pain meds + abuse set] (361)
 - 19 (10 or (15 and 16)) not (17 or 18) [narcotics + abuse set] (1849)
 - 20 or/17-19 [opioid, pain med or narcotics + abuse set] (64470)
 - 21 and/8,17 [models + opioid abuse] (1044)
 - 22 and/8,18 [models + pain med abuse] (6)
 - 23 and/8,19 [models + narcotic abuse] (18)
 - 24 or/21-23 [models + all abuse set] (1068)
 - 25 *health care policy/ or *public policy/ or *policy/ or (policy* or policies*).ti. (112777)
 - 26 ((health or healthcare or government* or public or social) adj2 (policy* or policies*)).ti,ab,kw. (60496)
 - 27 or/25-26 [policy set] (153909)
 - 28 exp *health care planning/ or ((health or healthcare) adj2 planning).ti,ab,kw. [health planning set] (42484)
 - 29 *public health/ or (public health or community health).ti,ab,kw. [public health set] (290343)
 - 30 and/24,27 [models + all abuse set + policy set] (12)

- 31 and/24,28 [models + all abuse set + health planning set] (1)
- 32 and/24,29 [models + all abuse set + public health set] (45)
- 33 or/30-32 [models + all abuse set + policy, planning, public health set] (56)
- 34 (exp animal/ not human/) or (animal? or beaver? or beef or bovine or breeding or canine or castoris or cat or cattle or cats or chicken? or cow or dog or dogs or equine or foal or foals or fish or livestock or mice or mouse or plant or plants or pork or porcine or protozoa? or purebred or rat or rats or rodent or rodents or sheep or thoroughbred).ti. or veterinari\$.ti,ab,kw,hw. or insect\$.ti,ab,kw,hw. (5459213)
- 35 33 not 34 [not animals] (53)
- 36 limit 35 to yr="2000 -Current" (48)
- 37 36 not Conference Abstract.pt. (39)
 - 38 remove duplicates from 37 [Final set] (39)

ProQuest

ProQuest Dissertations & Theses Global July 9, 2018

Results = 22

(noft((simulation* OR model*) NEAR/2 computer* OR "in silico?") OR noft(((theoretic* OR mathematic* OR experimental OR computer*) NEAR/2 (model* OR simulat*))) OR noft("discrete event system*" or "conceptual dynamic system*" or "system dynamic*" or "dynamical system" or ((agent-based or "agent based" or computation* or discrete or discrete-time or dynamic* or mathematical or numerical or "SIR compartmental" or SIR or theoretical) NEAR/2 (model* or simulation* or microsimulat* or micro-simulat*))) OR noft(systems NEAR/2 (analys* OR thinking* OR medicine* OR complexity)) OR ti((model* OR simulation* OR microsimulat* OR micro-simulat*)) OR noft((computational* OR mathematical* OR numerical*) NEAR/2 (biolog* OR epidemiolog*)) AND (((noft(Morphinans OR Benzomorphans OR Pentazocine OR Phenazocine OR Buprenorphine OR Butorphanol OR Dextromethorphan OR Dextrorphan OR Diprenorphine OR Etorphine OR Levallorphan OR Levorphanol OR "Morphine Derivatives" OR Codeine OR Hydrocodone OR Oxycodone OR Dihydromorphine OR Ethylmorphine OR Heroin Hydromorphone OR Morphine OR Oxymorphone OR Thebaine OR Nalbuphine OR Nalorphine OR Naloxone OR Naltrexone OR Nalone OR Naloxon OR Narcan OR Narcanti OR Noscapine OR Papaverine OR opioid* OR opiod* OR opiate* OR narcotic* OR Alfentanil OR algopan OR Alphaprodine OR beta-casomorphins OR "beta casomorphins" OR biopon OR Buprenorphine OR Butorphanol OR carfentanil OR Codeine OR cofapon OR dermorphin OR desomorphine OR Dextromoramid OR Dextropropoxyphene OR dezocine OR dihydrocodeine OR Dihydromorphine OR Diphenoxylate OR "endomorphin 1" OR "endomorphin 2" OR Enkephalin OR eseroline OR Ethylketocyclazocine OR Ethylmorphine OR Etorphine OR Fentanyl OR Heroin OR Hydrocodone OR Hydromorphone OR ketobemidone OR laudanum OR laudanum OR Levorphanol OR lofentanil OR Meperidine OR Meptazinol OR Methadone OR "Methadyl Acetate" OR Morphine OR Nalbuphine OR nepenthe OR nocistatin OR normethadone OR omnopon OR opial OR "Opiate Alkaloid*" OR Opium* OR opon OR oposal OR Oxycodone OR Oxymorphone OR Pentazocine OR Phenazocine OR Phenoperidine OR Pirinitramide OR pantopon* OR pavon OR Promedol OR protopine OR remifentanil OR Sufentanil OR tetrapon OR Tilidine OR Tramadol) OR noft(Pain NEAR/2 (med OR meds OR medicine* OR medication* OR killer* OR drug* OR "drug therap*"))) AND noft((drug NEAR/2 monitoring) OR (prescription NEAR/2 drug NEAR/2 (misuse* OR mis-use* OR "non-

medical use")) OR NMUPD OR (abuse* OR addict* OR dependence* or misuse* OR mis-use* OR overdos* OR epidemic* OR pandemic*)) AND noft(policy OR policies OR "public health" OR "community health")) AND pd(20000101-20181231)) OR (ti(The impact of prescription drug monitoring programs on the dynamics of the opioid epidemic) AND au(gatley))

CINAHL

CINAHL Complete (Ebscohost) 7-9-18

#	Query	Results
S27	S9 AND S21 AND S25	Limiters - Published Date: 20000101-20181231 115
S26	S9 AND S21 AND S25	121
S25	S22 OR S23 OR S24	760,206
S24	policy OR policies OR "public health"	232,957
S23	(MH "Public Health") OR (MH "Epidemiology+") OR (MH "Population Surveillance+") OR (MH "Risk Factors+")	596,804
S22	(MH "Health Policy") OR (MH "Policy Studies") OR (MH "Health Policy Studies")	42,965
S21	S19 OR S20	21,849
S20	S14 AND S18	6,537
S19	S13 AND S18	21,849
S18	S15 OR S16 OR S17	217,664
S17	(MH "Substance Use Disorders+")	133,925
S16	(MH "Substance Abuse+")	56,504
S15	(drug N/2 monitoring) or (prescription N/2 drug N/2 (misuse* or mis-use* or "non-medical use")) or NMUPD or (abuse* or addict* or dependence* or misuse* or mis-use* or overdos* or epidemic* or pandemic*)	141,210
S14	((Pain N/2 (med or meds or medicine* or medication* or killer* or drug* or drug therap*)) OR narcotic*	15,120
S13	(S10 OR S11 OR S12 OR S13)	59,482
S12	Morphinans or Benzomorphans or Pentazocine or Phenazocine or Buprenorphine or Butorphanol or Dextromethorphan or Dextrophan or Diprenorphine or Etorphine or Levallorphan or Levorphanol or "Morphine Derivatives" or Codeine or Hydrocodone or Oxycodone or Dihydromorphine or Ethylmorphine or Heroin Hydromorphone or Morphine or Oxymorphone or Thebaine or Nalbuphine or Nalorphine or Naloxone or Naltrexone or Nalone or Naloxon or Narcan or Narcanti or Noscapine or Papaverine or opioid* or opiod* or opiate* or narcotic* or Alfentanil or algozan or Alphaprodine or beta-casomorphins or "beta casomorphins" or biopon or Buprenorphine or Butorphanol or carfentanil or Codeine or cofapon or dermorphin or desomorphine or Dextromoramide or Dextropropoxyphene or dezocine or dihydrocodeine or Dihydromorphine or Diphenoxylate or "endomorphin 1" or "endomorphin 2" or Enkephalin or eseroline or Ethylketocyclazocine or Ethylmorphine or Etorphine or Fentanyl or Heroin or Hydrocodone or Hydromorphone	

or ketobemidone or laudanon or laudanum or Levorphanol or lofentanil or Meperidine or Meptazinol or Methadone or "Methadyl Acetate" or Morphine or Nalbuphine or nepenthe or nocistatin or normethadone or omnopon or opial or "Opiate Alkaloid*" or Opium* or opon or oposal or Oxycodone or Oxymorphone or Pentazocine or Phenazocine or Phenoperidine or Pirinitramide or pantopon* or pavon or Promedol or protopine or remifentanil or Sufentanil or tetrapon or Tilidine or Tramadol 56,808

S11 (MH "Narcotic Antagonists+") OR (MH "Narcotics+") 32,893

S10 (MH "Analgesics, Opioid") OR (MH "Alphaprodine") OR (MH "Codeine") OR (MH "Dihydromorphinone") OR (MH "Fentanyl+") OR (MH "Heroin") OR (MH "Meperidine") OR (MH "Methadone") OR (MH "Morphine") OR (MH "Nalbuphine") OR (MH "Opium") OR (MH "Oxycodone") OR (MH "Pentazocine") OR (MH "Propoxyphene") OR (MH "Sufentanil") OR (MH "Tramadol") 27,582

S9 (S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7) OR S8 160,609

S8 TI (model* or simulation* or microsimulat* or micro-simulat*) 92,147

S7 (MH "Systems Analysis") OR (systems N/2 (analys* or thinking* or medicine* or complexity)) 3,649

S6 (MH "Systems Analysis") 3,649

S5 "discrete event system*" or "conceptual dynamic system*" or "system dynamic*" or "dynamical system" or ((agent-based or "agent based" or computation* or discrete or discrete-time or dynamic* or mathematical or numerical or "SIR compartmental" or SIR or theoretical) N/2 (model* or simulation* or microsimulat* or micro-simulat*)) 258

S4 ((MH "Models, Theoretical") OR (MH "Models, Statistical") OR (MH "Nursing Models, Theoretical+")) OR ((theoretic* or mathematic* or experimental) N/2 (model* or simulat*)) 73,897

S3 (MH "Models, Theoretical") OR (MH "Models, Statistical") OR (MH "Nursing Models, Theoretical+") 73,897

S2 (((simulation* or model*) N/2 computer*) or "in silico?) 1,696

S1 (MH "Computer Simulation") 13,805

arXiv

arXiv.org July 16, 2018

Two strategies: Combined results total 19

#1 all=model* AND opioid* 18

#2 all=model*; AND all=(opioid* OR opiate* OR narcotic* OR Codeine OR Fentanyl OR Heroin OR Hydrocodone OR Hydromorphone OR Methadone OR Morphine OR Opium OR Oxycodone) 6

#3 #1 or #2 19