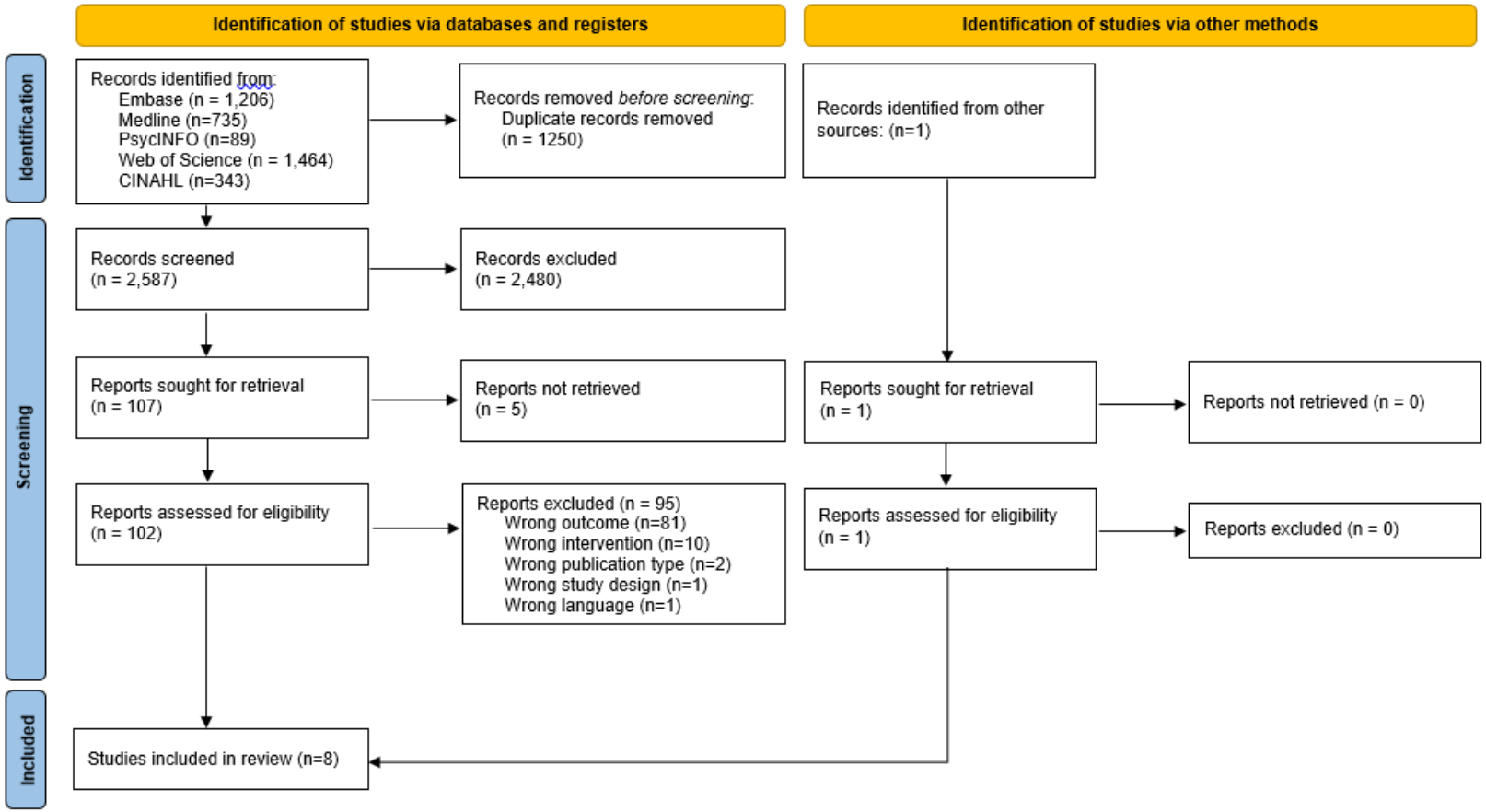
Figure 1. PRISMA flow diagram of included and excluded studies



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: http://www.prisma-statement.org/

Table S1. PICO (inclusion and exclusion criteria)

Criterion	Inclusion	Exclusion
Population	Humans	Animals, in vitro
Intervention	• Antivirals against influenza (e.g., oseltamivir, zanamivir, baloxavir marboxil and peramivir) • Antivirals against influenza-like illnesses (e.g., ribavirin, remdesivir, molnupiravir, Nirmatrelvir/ritonavir [Paxlovid]).	• Not about antivirals • Not about stockpile management or distribution of antivirals o Articles focused only on prescriptions are not of interest in this review. o Articles focused on personal stockpiles are also not of interest in this review (such as factors motivating HCPs to make their own stockpile)
Disease	Respiratory viruses associated with severe disease (e.g., influenza, RSV, SARS, MERS, COVID-19)	Non respiratory viruses (e.g., HIV, hepatitis, HPV)
Study types/designs included	• Cohort studies • Case-control studies • Observational studies • Quasi-experimental studies • Experimental studies • Randomized control trials • Case reports/case series • Qualitative studies • Mixed methods • Modelling studies	• Literature reviews • Opinion papers • Conference abstract • Protocol • Thesis • Book chapters
Language	Articles in French or English	Articles in languages other than French or English
Setting	Pandemic or non-pandemic setting	No exclusion based on setting
Outcome	Behavioural factors influencing the distribution and stockpiling of antiviral medication	Not about behavioural factors influencing the distribution and stockpiling of antiviral medication

Note. COVID-19: Coronavirus Disease 2019, HIV: Human Immunodeficiency Virus, HPV: Human Papillomavirus, MERS: Middle East Respiratory Syndrome, SARS: Severe Acute Respiratory Syndrome, RSV: Respiratory Syncytial Virus.

Table S2. Search strategy

Embase

1. Influenza, Human/
2. exp Influenzavirus A/
3. exp Influenzavirus B/
4. (influenza* or flu).mp.
5. 1 or 2 or 3 or 4
6. Antiviral agents/
7. Antiviral*.mp.
8. (neuraminidase inhibitor* or NA inhibitor*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]
9. Oseltamivir/ or Zanamivir/ or Peramivir/
10. (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]
11. "cap-dependent endonuclease inhibitor*".mp.
12. baloxavir/
13. ("Baloxavir marboxil" or Baloxavir or Xofluza).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]
14. Remdesivir/ or Nirmatrelvir/ or Ritonavir/ or Umifenovir/ or Favipiravir/ or Laninamivir/ or Baloxavir/ or Molnupiravir/ or Ribavirin/
15. ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]
16. 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13
17. ((distribution or dispensing or allocation or procurement).mp. adj2 (Antiviral agents/ or Antiviral*.mp. or (neuraminidase inhibitor* or NA inhibitor*).mp. or (Oseltamivir/ or Zanamivir/ or Peramivir/) or (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. or cap-dependent endonuclease inhibitor*.mp. or baloxavir/ or ("Baloxavir marboxil" or Baloxavir or Xofluza).mp.)) or ((Antiviral agents/ or Antiviral*.mp. or (neuraminidase inhibitor* or NA inhibitor*).mp. or (Oseltamivir/ or Zanamivir/ or Peramivir/) or (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. or cap-dependent endonuclease inhibitor*.mp. or baloxavir/ or ("Baloxavir marboxil" or Baloxavir or Xofluza).mp.) adj2 (distribution or dispensing or allocation or procurement).mp.) [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]
18. ((distribution or dispensing or allocation or procurement).mp. adj2 (Remdesivir/ or Nirmatrelvir/ or Ritonavir/ or Umifenovir/ or Favipiravir/ or Laninamivir/ or Baloxavir/ or Molnupiravir/ or Ribavirin/ or ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or

"Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole).mp.)) or ((Remdesivir/ or Nirmatrelvir/ or Ritonavir/ or Umifenovir/ or Favipiravir/ or Laninamivir/ or Baloxavir/ or Molnupiravir/ or Ribavirin/ or ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole).mp.) adj2 (distribution or dispensing or allocation or procurement).mp.) [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]

19. ("Supply chain*" or stockpil* or logistics or "resource allocation" or inventor* or "supply management" or "pandemic suppl*" or "phone-based consultation" or "home deliver*" or "community distribution" or "hospital distribution" or "pharmacy distribution" or "home distribution" or "mass prophylaxis" or "pandemic preparedness" or "strategic national stockpile*" or SNS).mp.
20. 5 and 17
21. 5 and 16 and 19
22. (14 or 15) and 19
23. 18 or 20 or 21 or 22
24. 23 not (HIV or herpes or hepatitis).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword heading word, floating subheading word, candidate term word]
25. limit 24 to yr="1988 -Current"

Medline

1. "Influenza, Human"/
2. exp "Influenzavirus A"/
3. exp "Influenzavirus B"/
4. (influenza* or flu).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
5. 1 or 2 or 3 or 4
6. "Antiviral agents"/
7. Antiviral*.mp.
8. ("neuraminidase inhibitor*" or "NA inhibitor*").mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
9. Oseltamivir/ or Zanamivir/ or Peramivir/
10. (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary

concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]

11. "cap-dependent endonuclease inhibitor*".mp.
12. baloxavir/
13. ("Baloxavir marboxil" or Baloxavir or Xofluza).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
14. Remdesivir/ or Nirmatrelvir/ or Ritonavir/ or Umifenovir/ or Favipiravir/ or Laninamivir/ or Baloxavir/ or Molnupiravir/ or Ribavirin/
15. (Remdesivir or Nirmatrelvir or ritonavir or norvir or Umifenovir or Favipiravir or Laninamivir or inavir or Arbidol or Avigan or Veklury or paxlovid or molnupiravir or Lagevrio or Favilavir or Avifavir or Ribavirin or Tribarivin or RBV or Virazole).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
16. 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13
17. ((distribution or dispensing or allocation or procurement).mp. adj2 (Antiviral agents/ or Antiviral*.mp. or (neuraminidase inhibitor* or NA inhibitor*).mp. or (Oseltamivir/ or Zanamivir/ or Peramivir/) or (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. or cap-dependent endonuclease inhibitor*.mp. or baloxavir/ or ("Baloxavir marboxil" or Baloxavir or Xofluza).mp.)) or ((Antiviral agents/ or Antiviral*.mp. or (neuraminidase inhibitor* or NA inhibitor*).mp. or (Oseltamivir/ or Zanamivir/ or Peramivir/) or (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. or cap-dependent endonuclease inhibitor*.mp. or baloxavir/ or ("Baloxavir marboxil" or Baloxavir or Xofluza).mp.) adj2 (distribution or dispensing or allocation or procurement).mp.) [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
18. ((distribution or dispensing or allocation or procurement).mp. adj2 (Remdesivir/ or Nirmatrelvir/ or Ritonavir/ or Umifenovir/ or Favipiravir/ or Laninamivir/ or Baloxavir/ or Molnupiravir/ or Ribavirin/ or ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole).mp.)) or ((Remdesivir/ or Nirmatrelvir/ or Ritonavir/ or Umifenovir/ or Favipiravir/ or Laninamivir/ or Baloxavir/ or Molnupiravir/ or Ribavirin/ or ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole).mp.) adj2 (distribution or dispensing or allocation or procurement).mp.) [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary

concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]

19. ("Supply chain*" or stockpil* or logistics or "resource allocation" or inventor* or "supply management" or "pandemic suppl*" or "phone-based consultation" or "home deliver*" or "community distribution" or "hospital distribution" or "pharmacy distribution" or "home distribution" or "mass prophylaxis" or "pandemic preparedness" or "strategic national stockpile*" or SNS).mp.
20. 5 and 17
21. 5 and 16 and 19
22. (14 or 15) and 19
23. 18 or 20 or 21 or 22
24. 23 not (HIV or herpes or hepatitis).mp.
25. limit 24 to yr="1988 -Current"

CINAHL

1. MH ("Influenza, Human")
2. MH ("Influenzavirus A+")
3. MH ("Influenzavirus B+")
4. influenza* OR flu
5. (S4) OR (S3) OR (S2) OR (S1)
6. MH ("Antiviral agents")
7. Antiviral*
8. "neuraminidase inhibitor*" OR "NA inhibitor*"
9. MH (Oseltamivir) OR MH (Zanamivir) OR MH (Peramivir)
10. oseltamivir OR tamiflu OR zanamivir OR relenza OR Dectova OR Laninamivir OR Inavir OR peramivir OR Rapivab OR rapiacta
11. "cap-dependent endonuclease inhibitor*"
12. MH (baloxavir)
13. "Baloxavir marboxil" OR Baloxavir OR Xofluza
14. MH (Remdesivir) OR MH (Nirmatrelvir) OR MH (Ritonavir) OR MH (Umifenovir) OR MH (Favipiravir) OR MH (Laninamivir) OR MH (Baloxavir) OR MH (Molnupiravir) OR MH (Ribavirin)
15. Remdesivir OR Nirmatrelvir OR ritonavir OR norvir OR Umifenovir OR Favipiravir OR Laninamivir OR inavir OR Arbidol OR Avigan OR Veklury OR paxlovid OR molnupiravir OR Lagevrio OR Favilavir OR Avifavir OR Ribavirin OR Tribarivin OR RBV OR Virazole
16. (S6) OR (S7) OR (S8) OR (S9) OR (S10) OR (S11) OR (S12) OR (S13)
17. ((distribution OR dispensing OR allocation OR procurement) N2 (S16)) or ((S16) N2 (distribution OR dispensing OR allocation OR procurement))
18. ((distribution OR dispensing OR allocation OR procurement) N2 ((S15) or (S14))) or (((S15) or (S14)) N2 (distribution OR dispensing OR allocation OR procurement))
19. "Supply chain*" OR stockpil* OR logistics OR "resource allocation" OR inventor* OR "supply management" OR "pandemic suppl*" OR "phone-based consultation" OR "home deliver*" OR "community distribution" OR "hospital distribution" OR "pharmacy distribution" OR "home distribution" OR "mass prophylaxis" OR "pandemic preparedness" OR "strategic national stockpile*" OR SNS
20. (S5) AND (S17)

21. (S5) AND (S16) AND (S19)
22. ((S14) OR (S15)) AND (S19)
23. (S18) OR (S20) OR (S21) OR (S22)
24. (S23) NOT (HIV OR herpes OR hepatitis)

Filter 1988-01 to today

PsycINFO

1. influenza/
2. (influenza* or flu).mp.
3. 1 or 2
4. antiviral drugs/
5. Antiviral*.mp.
6. (neuraminidase inhibitor* or NA inhibitor*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
7. (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
8. "cap-dependent endonuclease inhibitor*".mp.
9. ("Baloxavir marboxil" or Baloxavir or Xofluza).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
10. ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
11. 4 or 5 or 6 or 7 or 8 or 9
12. ((distribution or dispensing or allocation or procurement).mp. adj2 (antiviral drugs/ or Antiviral*.mp. or (neuraminidase inhibitor* or NA inhibitor*).mp. or (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. or "cap-dependent endonuclease inhibitor*".mp. or ("Baloxavir marboxil" or Baloxavir or Xofluza).mp.)) or ((antiviral drugs/ or Antiviral*.mp. or (neuraminidase inhibitor* or NA inhibitor*).mp. or (oseltamivir or tamiflu or zanamivir or relenza or Dectova or Laninamivir or Inavir or peramivir or Rapivab or rapiacta).mp. or "cap-dependent endonuclease inhibitor*".mp. or ("Baloxavir marboxil" or Baloxavir or Xofluza).mp.) adj2 (distribution or dispensing or allocation or procurement).mp.) [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
13. (((distribution or dispensing or allocation or procurement) adj2 ("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole)) or (("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "Lagevrio" or "Favilavir" or "Avifavir" or Ribavirin or Tribarivin or RBV or Virazole) adj2 (distribution or dispensing or allocation or procurement))).mp.

14. ("Supply chain*" or stockpil* or logistics or "resource allocation" or inventor* or "supply management" or "pandemic suppl*" or "phone-based consultation" or "home deliver*" or "community distribution" or "hospital distribution" or "pharmacy distribution" or "home distribution" or "mass prophylaxis" or "pandemic preparedness" or "strategic national stockpile*" or SNS).mp.
15. 3 and 12
16. 3 and 11 and 14
17. 10 and 14
18. 13 or 15 or 16 or 17
19. 18 not (HIV or herpes or hepatitis).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
20. limit 19 to yr="1988 -Current"

Web of science

1. TS=(("Influenza, Human") OR ("Influenzavirus A") OR ("Influenzavirus B") OR (influenza* OR flu))
2. TS=(Antiviral agents)
3. TS=(Antiviral*)
4. TS=("neuraminidase inhibitor*" OR "NA inhibitor*")
5. TS=(oseltamivir or tamiflu or "GS 4104" or GS4104 or GS-4104 or "GS 4071" or GS4071 or GS-4071 or zanamivir or relenza or "GG 167" or GG167 or GG-167 or CS-8958 or Dectova or Laninamivir or R-125489 or R125489 or "R 125489" or Inavir or peramivir or "BCX 1812" or BCX1812 or BCX-1812 or "RWJ 270201" or RWJ270201 or RWJ-270201 or Rapivab or rapiacta)
6. TS="cap-dependent endonuclease inhibitor*"
7. TS=("Baloxavir marboxil" or Baloxavir or S-033188 or Xofluza or S-033447 or "Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "MK-4482" or "Lagevrio" or "GS-5734" or "PF-07321332" or "ABT-538" or "EIDD-2801" or "T-705" or "Favilavir" or "Avifavir" or "CS-8958" or "R-118958" or "R-125489" or Ribavirin or Tribarivin or RBV or Virazole)
8. TS=("Remdesivir" or "Nirmatrelvir" or "ritonavir" or "norvir" or "Umifenovir" or "Favipiravir" or "Laninamivir" or "inavir" or "Arbidol" or "Avigan" or "Veklury" or "paxlovid" or "molnupiravir" or "MK-4482" or "Lagevrio" or "GS-5734" or "PF-07321332" or "ABT-538" or "EIDD-2801" or "T-705" or "Favilavir" or "Avifavir" or "CS-8958" or "R-118958" or "R-125489" or Ribavirin or Tribarivin or RBV or Virazole)
9. #2 or #3 or #4 or #5 or #6 or #7
10. #1 AND #9
11. #8 OR #10
12. TS=("Supply chain*" OR stockpil* OR logistics OR "resource allocation" OR inventor* OR "supply management" OR "pandemic suppl*" OR "phone-based consultation" OR "home deliver*" OR "community distribution" OR "hospital distribution" OR "pharmacy distribution" OR "home distribution" OR "mass prophylaxis" OR "pandemic preparedness" OR "strategic national stockpile*" OR SNS)
13. #11 AND #12
14. #13 NOT TS=(HIV or herpes or hepatitis)

Table S3. List of articles excluded during full text

First author (year)	Title	Reason for exclusion
Abramovich M.N. (2017)	Hospital influenza pandemic stockpiling needs: A computer simulation	wrong outcome
Adini B. (2009)	Relationship between equipment and infrastructure for pandemic influenza and performance in an avian flu drill	wrong outcome
Adisasmito W. (2015)	Pandemic influenza and health system resource gaps in Bali: an analysis through a resource transmission dynamics model	wrong intervention
Aljadeed, R. (2021)	The Impact of COVID-19 on Essential Medicines and Personal Protective Equipment Availability and Prices in Saudi Arabia.	wrong outcome
AlMahasis S.O. (2025)	Inside the pharmacy: A qualitative study uncovering community pharmacists' experiences with Paxlovid prescribing	wrong intervention
Andradottir S. (2011)	Reactive strategies for containing developing outbreaks of pandemic influenza	wrong outcome
Antoon J.W. (2023)	Trends in Outpatient Influenza Antiviral Use Among Children and Adolescents in the United States	wrong outcome
Araz, O.M. (2011)	A simulation model for policy decision analysis: a case of pandemic influenza on a university campus.	wrong outcome
Arinaminpathy N. (2008)	Antiviral treatment for the control of pandemic influenza: Some logistical constraints	wrong outcome
Arinaminpathy N. (2009)	Logistics of control for an influenza pandemic	wrong outcome
Arino J. (2009)	Antiviral resistance during pandemic influenza: Implications for stockpiling and drug use	wrong outcome
Balicer R.D. (2005)	Cost-benefit of stockpiling drugs for influenza pandemic	wrong outcome
Becker N.G. (2011)	Can antiviral drugs contain pandemic influenza transmission?	wrong outcome
Belmaker I. (2009)	Adherence with oseltamivir chemoprophylaxis among workers exposed to poultry during avian influenza outbreaks in southern Israel	wrong outcome
Beresniak A. (2020)	Cost-effectiveness of public health interventions against human influenza pandemics in France: a methodological contribution from the FLURESP European Commission project	wrong outcome
Buchholz U. (2007)	Stockpiling of anti-influenza drugs in private households: a survey in Germany	wrong intervention
Carrasco L.R. (2011)	Strategies for antiviral stockpiling for future influenza pandemics: A global epidemic-economic perspective	wrong outcome
Carrat F. (2006)	A 'small-world-like' model for comparing interventions aimed at preventing and controlling influenza pandemics	wrong outcome
Chang C.T. (2022)	Managing nirmatrelvir/ritonavir during COVID-19: pharmacists' experiences from the Perak state of Malaysia	wrong study design
Chen J.Z. (2010)	Coevolution of Epidemics, Social Networks, and Individual Behavior: A Case Study	Wrong outcome

Chen J. (2018)	Feedback Between Behavioral Adaptations and Disease Dynamics	wrong outcome
Colizza V. (2007)	Modeling the worldwide spread of pandemic influenza: Baseline case and containment interventions	wrong outcome
Cruz, A.T. (2012)	Increasing out-of-hospital regional surge capacity for H1N1 2009 influenza A through existing community pediatrician offices: a qualitative description of quality improvement strategies.	wrong outcome
Da Silva, P.R. (2003)	Logistic issues and potential prescribing costs associated with use of neuraminidase inhibitors for the treatment of influenza in primary care.	wrong outcome
Dimitrov N.B. (2011)	Optimizing tactics for use of the U.S. antiviral strategic national stockpile for pandemic influenza	wrong outcome
Docter S.P. (2011)	Public perceptions of pandemic influenza resource allocation: A deliberative forum using Grid/Group analysis	wrong outcome
Dorj G. (2023)	Ensuring access to novel COVID-19 therapeutics in Pacific island countries and areas	wrong outcome
Dover D.C. (2016)	Pandemic Risk Assessment Model (PRAM): a mathematical modeling approach to pandemic influenza planning	wrong outcome
Drake, T. (2015)	Buy now, saved later? The critical impact of time-to-pandemic uncertainty on pandemic cost-effectiveness analyses	wrong outcome
Duerr H.P. (2007)	Influenza pandemic intervention planning using InfluSim: Pharmaceutical and non-pharmaceutical interventions	wrong outcome
Duque J. (2014)	Influenza vaccines and influenza antiviral drugs in Africa: are they available and do guidelines for their use exist?	wrong outcome
Ferguson N.M. (2005)	Strategies for containing an emerging influenza pandemic in Southeast Asia	wrong outcome
Gani R. (2005)	Potential impact of antiviral drug use during influenza pandemic	wrong outcome
Gasink L.B. (2009)	Stockpiling drugs for an avian influenza outbreak: Examining the surge in oseltamivir prescriptions during heightened media coverage of the potential for a worldwide pandemic	wrong intervention
Gauld N.J. (2012)	Five years of non-prescription oseltamivir: Effects on resistance, immunization and stockpiling	wrong outcome
Goldstein E. (2009)	Conditions Under Which Predispensing of Antiviral Drugs to Individuals at High Risk of Death from Pandemic Influenza Is Expected to Save Lives: Predispensing of Antiviral Drugs to Individuals at High Risk of Severe Outcomes of H1N1 Influenza.	wrong outcome
Goldstein E. (2010)	Pre-dispensing of antivirals to high-risk individuals in an influenza pandemic	wrong outcome
Goldstein E. (2010)	Distribution of vaccine/antivirals and the 'least spread line' in a stratified population	wrong outcome

Greene, S.K. (2012)	Patterns in influenza antiviral medication use before and during the 2009 H1N1 pandemic, Vaccine Safety Datalink Project, 2000-2010	wrong intervention
Greer A.L. (2013)	Using a Dynamic Model to Consider Optimal Antiviral Stockpile Size in the Face of Pandemic Influenza Uncertainty	wrong outcome
Greer A.L. (2013)	Can informal social distancing interventions minimize demand for antiviral treatment during a severe pandemic?	wrong outcome
Gupta, R. K. (2007)	Public health responses to influenza in care homes: a questionnaire-based study of local Health Protection Units.	wrong outcome
Hagenaars, T.J. (2004)	Pandernic influenza and health care demand: dynamic modelling	wrong outcome
Halder N. (2010)	Analysis of the effectiveness of interventions used during the 2009 A/H1N1 influenza pandemic	wrong outcome
Han A.X. (2025)	The global demand and potential public health impact of oral antiviral treatment stockpile for influenza pandemics	wrong outcome
Harrington J.E. (2010)	Stockpiling anti-viral drugs for a pandemic: The role of Manufacturer Reserve Programs	wrong outcome
Hoteit R. (2024)	Choosing and accessing COVID-19 treatment options: a qualitative study with patients, caregivers, and health care providers in Lebanon	wrong outcome
Joseph J.T. (2025)	Evaluating the introduction of COVID-19 oral antivirals through a test and treat program: outcomes from a cohort study in four African countries	Wrong intervention
Kelso J.K. (2010)	The impact of case diagnosis coverage and diagnosis delays on the effectiveness of antiviral strategies in mitigating pandemic influenza A/H1N1 2009	wrong outcome
Khazeni N. (2009)	Effectiveness and cost-effectiveness of expanded antiviral prophylaxis and adjuvanted vaccination strategies for an influenza A (H5N1) pandemic	wrong outcome
Khilji S.U.S. (2013)	Distribution of healthcare resources for influenza pandemic response in Cambodia	wrong outcome
Kieck D. (2023)	Medication-Related Problems Identified and Addressed by Pharmacists Dispensing COVID-19 Antivirals at a Community Pharmacy	wrong outcome
Kim S. (2022)	Estimation of optimal antiviral stockpile for a novel influenza pandemic	wrong outcome
Koyuncu M. (2010)	Optimal resource allocation model to mitigate the impact of pandemic influenza: A case study for Turkey	wrong outcome
Kuo S. (2021)	Managing medication supply chains: Lessons learned from Taiwan during the COVID-19 pandemic and preparedness planning for the future	wrong intervention
Kwok K.O. (2013)	Antiviral stockpiles for influenza pandemics from the household perspective: Treatment alone versus treatment with prophylaxis	Wrong intervention
Lautenbach E. (2010)	Initial response of health care institutions to emergence of H1N1 Influenza: Experiences, Obstacles, and perceived future needs	wrong outcome

Lee V.J. (2006)	Economics of neuraminidase inhibitor stockpiling for pandemic influenza, Singapore	wrong outcome
Le-Huy T. (2024)	A study survey on molnupiravir treatment in COVID-19 patients at home in Ninh Thuan province, Vietnam	wrong outcome
Li, G.D. (2026)	Spatially Equitable Allocation of Medical Resources for Pandemic Containment: A Service Level-Based Approach	wrong outcome
Liebenstein T. (2024)	Telemedicine for Prescribing Nirmatrelvir/Ritonavir: Safety, Logistics, and Challenges	wrong outcome
Lim S. (2020)	Developing an Ethics Framework for Allocating Remdesivir in the COVID-19 Pandemic	wrong outcome
Longini Jr. I.M. (2005)	Containing pandemic influenza at the source	wrong outcome
Lopez D. (2024)	Supply of nirmatrelvir/ritonavir and molnupiravir for patients with COVID-19 in the first eight months since listing on the Australian Pharmaceutical Benefits Scheme: A retrospective observational study	wrong intervention
Lugner A.K. (2009)	Investment decisions in influenza pandemic contingency planning: Cost-effectiveness of stockpiling antiviral drugs	wrong outcome
Lydeamore M. (2016)	Choice of Antiviral Allocation Scheme for Pandemic Influenza Depends on Strain Transmissibility, Delivery Delay and Stockpile Size	wrong outcome
McCaw J.M. (2007)	Prophylaxis or treatment? Optimal use of an antiviral stockpile during an influenza pandemic	wrong outcome
McVernon J. (2010)	Modelling strategic use of the national antiviral stockpile during the CONTAIN and SUSTAIN phases of an Australian pandemic influenza response	wrong outcome
Meng E.H. (2010)	Strategies for the use of oseltamivir and zanamivir during pandemic outbreaks	wrong outcome
Merler S. (2009)	Age-prioritized use of antivirals during an influenza pandemic	wrong outcome
Miller, P.E. (2013)	Supply of neuraminidase inhibitors related to reduced influenza A (H1N1) mortality during the 2009-2010 H1N1 pandemic: summary of an ecological study.	wrong outcome
Moss R. (2011)	Diagnosis and antiviral intervention strategies for mitigating an influenza epidemic	wrong outcome
Moss R. (2016)	Reducing disease burden in an influenza pandemic by targeted delivery of neuraminidase inhibitors: Mathematical models in the Australian context	wrong outcome
Mun F. (2021)	A survey of US hospitals' criteria for the allocation of remdesivir to treat COVID-19	wrong outcome
Newall A.T. (2010)	Cost-effectiveness of pharmaceutical-based pandemic influenza mitigation strategies	wrong outcome
Nuno M. (2007)	Assessing the role of basic control measures, antivirals and vaccine in curtailing pandemic influenza: Scenarios for the US, UK and the Netherlands	wrong outcome

Ortiz J.R. (2006)	A national survey of the Infectious Diseases Society of America Emerging Infections Network concerning neuraminidase inhibitor prescription practices and pandemic influenza preparations	wrong intervention
Panovska-Griffiths J. (2019)	Are we prepared for the next influenza pandemic? Lessons from modelling different preparedness policies against four pandemic scenarios	wrong outcome
Parra-Rojas C. (2018)	Neuraminidase inhibitors in influenza treatment and prevention-Is it time to call it a day?	wrong outcome
Prosper O. (2011)	Modeling control strategies for concurrent epidemics of seasonal and pandemic H1N1 influenza	wrong outcome
Ritvo P. (2010)	Canadian survey on pandemic flu preparations	wrong outcome
Savinkina A. (2022)	Determining population-level allocation strategies for COVID-19 treatments in the United States using a quantitative framework, a case study using nirmatrelvir/ritonavir	wrong outcome
Savinkina A. (2022)	Population-Level Strategies for Nirmatrelvir/Ritonavir Prescribing-A Cost-effectiveness Analysis.	wrong outcome
Schneider R.B. (2010)	Pandemic influenza: antiviral preparedness and health care workers	wrong outcome
Schumacher L. (2023)	Management of the COVID-19 health crisis: A survey in Swiss hospital pharmacies	wrong publication type
Schumacher L. (2023)	Management of the COVID-19 health crisis: A survey of Swiss health authorities' response	wrong publication type
Serna-Ojeda J.C. (2012)	Survey response capacity highly specialized hospitals before a medical disaster: After the influenza pandemic in Mexico	wrong language
Shaw K.A. (2006)	The GP's response to pandemic influenza: a qualitative study	wrong outcome
Singh B. (2015)	Optimizing distribution of pandemic influenza antiviral drugs	wrong outcome
Sun, P. (2009)	Selfish Drug Allocation for Containing an International Influenza Pandemic at the Onset	wrong outcome
Watson S.I. (2017)	Evidence synthesis and decision modelling to support complex decisions: Stockpiling neuraminidase inhibitors for pandemic influenza usage [Version 2; referees: 2 approved]	wrong outcome
Way A.S. (2010)	Antiviral distribution data--a potential syndromic surveillance system to assist pandemic health service operational planning	wrong outcome
Zhang Q. (2015)	Assessing the role of voluntary self-isolation in the control of pandemic influenza using a household epidemic model	wrong outcome
Zhang W.-D. (2014)	Optimized strategy for the control and prevention of newly emerging influenza revealed by the spread dynamics model	wrong outcome
Zhang, C.J. (2019)	Assignment optimization of pandemic influenza antiviral drugs in Urban pharmacies	wrong outcome

Table S4. Description of included studies

Author (year) - Country Study design	Setting	Study duration	Objectives	Description of sample	Sample size
Cohort studies					
Heimonen (2021) - United States Prospective cohort	Community	Recruitment: November 2019 to February 7, 2020 Test-and-treat phase: December 23, 2019 to February 7, 2020.	The aim of the study was to assess the feasibility of an at-home approach to influenza diagnosis and treatment through home testing, telehealth care, and rapid antiviral home delivery in Seattle-area households with children during the 2019–2020 influenza season.	Households with children in the Seattle metropolitan area. To be eligible for swab collection, individuals needed to have acute respiratory infection symptoms within 48 hours of onset, defined as new/worsening acute cough or at least two qualifying respiratory symptoms.	481
Mixed methods					
Fain (2014) - United States Survey and facilitated small group discussions	Community	February and March 2012	The aim of the study was to assess public perceptions of the acceptability and feasibility of alternative strategies for prescribing, distributing and dispensing antivirals and disseminating influenza information during a severe pandemic.	Adults from 3 geographically and demographically different locations: - Fort Benton, Montana (frontier rural) - Chattanooga, Tennessee (midsize urban/suburban) - Los Angeles, California (large urban)	232
Hunter (2012) - United States Focus group and survey	Decision makers and experts	The focus group and survey took place in 2009	The aim of the study was to describe the range of methods used by local health departments in California to manage antiviral activities and to gain a better understanding of the related challenges experienced by health departments and their community partners.	The focus group included members of the California Pandemic Influenza Vaccine and Antiviral Advisory Group. Health Officers and strategic national stockpile Coordinators were invited and asked to forward the survey to the person most informed about the department's H1N1 antiviral response. Respondents who reported being very or somewhat knowledgeable about their local health department's antiviral activities were included.	43

Cross sectional survey					
SteelFisher (2018) - United States Cross sectional survey	Community pharmacy	The survey took place between February 24 and April 23, 2012	The aim of the study was to inspect pharmacist views on whether they would be willing to participate in the response by providing antiviral drugs from government stockpiles to people who have prescriptions as well as their perceived barriers to participation and possible facilitators.	Pharmacists who: (1) were actively working in at least 1 community-based pharmacy that serves the public (as opposed to institutional settings like hospitals or nursing homes), and (2) personally dispensed prescriptions, defined as "fill, verify, and counsel on prescriptions".	1,076
SteelFisher (2018) - United States Cross sectional survey	Community	The survey took place between July 6 and August 13, 2017	The aim of the study was to determine: (1) What is the public's reaction to the idea of government-stockpiled antivirals in a pandemic flu scenario? (2) What is the public's personal receptivity to seeking stockpiled antivirals in a pandemic flu scenario, and what features of dispensing would increase or decrease motivation to go to a pharmacy to get antivirals? (3) What is the public's preference for pharmacy or public health clinic pick-up, and how, if at all, does that preference change under different cost scenarios?	Individuals aged 18+ years with a landline	1,300
Qualitative studies					
Pongcharoensuk (2012) - Thailand, Indonesia and Vietnam Interviews of key informants (and literature review)	Mixed (community, hospital and other settings)	Interviews took place from March 2008 to November 2009	The aim of the study was to analyse the contemporary policies regarding avian and human pandemic influenza control in three South-East Asia countries: Thailand, Indonesia and Vietnam	Ministries (health, agriculture, finance, and labour), policy makers at local and central levels, academics, public sector workers (doctors, veterinarians, public health specialists), non-governmental agencies, the private sector (representatives of the pharmaceutical industry and the poultry industry), United Nations agencies and donor agencies.	135

Vilhelmsson (2018) - Denmark Interviews	Decision makers and experts	Interviews took place from November 2015 to January 2016	The aim of the study was to investigate how the members of Denmark's core group of experts who developed the country's pandemic plan experienced Roche's lobbying. Sought to identify (1) arguments and (2) tactics used in lobbying, and to characterize interviewees' views on the impact of (3) lobbying and (4) scientific evidence on the decision to stockpile Tamiflu	Danish informants who had exceptional insight into high-level decision-making before and during the 2009 pandemic (6 of the 7 Danish core pandemic committee) as well as two members of the larger pandemic group who appeared repeatedly in media reports on the pandemic, and one recognized local expert in pandemic response who was not involved in the country's pandemic planning.	8
Workneh (2025) - Canada Semi-structured small group discussions	Decision makers and experts	Small group discussions took place in 2022	The aim of this study was to answer the following questions: 1. How has Nirmatrelvir/Ritonavir been administered across Canada? 2. What are the most promising strategies to deliver therapeutics in outpatient settings?	Jurisdictional representatives involved in the implementation of Nirmatrelvir/Ritonavir across Canada. Participants were recruited from federal, provincial, and territorial working groups and included managers and healthcare professionals involved in COVID-19 therapeutics planning.	NR

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SteelFisher, G. K., Caporello, H., Patel, A., Koonin, L. M., McGowan, E., Ben-Porath, E., & Blendon, R. J. (2018b). Public views on alternative methods for antiviral distribution and dispensing during an influenza pandemic. *Health Security*, *16*(6), 365–380. https://doi.org/10.1089/hs.2018.0073

Vilhelmsson, A., & Mulinari, S. (2018). Pharmaceutical lobbying and pandemic stockpiling of Tamiflu: A qualitative study of arguments and tactics. *Journal of Public Health*, *40*(3), 646–651. https://doi.org/10.1093/pubmed/fdx101

Workneh, A., Thieba, C., & Sicard, N. (2025). Implementation of the COVID-19 antiviral therapy Nirmatrelvir/Ritonavir (PaxlovidTM) across Canada in 2022: A qualitative analysis of key facilitating factors and challenges. *Canada Communicable Disease Report*, *51*(08), 303–311. https://doi.org/10.14745/ccdr.v51i08a03

Table S5. Risk of bias (MMAT)

Qualitative studies							
Author (year)	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**1.1. Is the qualitative approach appropriate to answer the research question?**	**1.2. Are the qualitative data collection methods adequate to address the research question?**	**1.3. Are the findings adequately derived from the data?**	**1.4. Is the interpretation of results sufficiently substantiated by data?**	**1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?**
Pongcharoensuk (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vilhelmsson (2018)	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes
Workneh (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fain (2014)	Mixed Method		Yes	Yes	Yes	Yes	Yes
Hunter (2012)	Mixed Method		Yes	Yes	Can't tell	Yes	Can't tell
Prospective cohort studies							
Author (year)	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**3.1. Are the participants representative of the target population?**	**3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?**	**3.3. Are there complete outcome data?**	**3.4. Are the confounders accounted for in the design and analysis?**	**3.5. During the study period, is the intervention administered (or exposure occurred) as intended?**
Heimonen (2021)	Yes	Yes	No	Yes	Yes	No	Yes
Cross sectional survey							
Author (year)	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**4.1. Is the sampling strategy relevant to address the research question?**	**4.2. Is the sample representative of the target population?**	**4.3. Are the measurements appropriate?**	**4.4. Is the risk of nonresponse bias low?**	**4.5. Is the statistical analysis appropriate to answer the research question?**
SteelFisher (2018a)	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
SteelFisher (2018b)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Fain (2014)	Mixed Method		Yes	Yes	Yes	Yes	No
Hunter (2012)	Mixed Method		Yes	Yes	Yes	Can't tell	Can't tell
Mixed methods							
Author (year)	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**5.1. Is there an adequate rationale for using a mixed methods design to address the research question?**	**5.2. Are the different components of the study effectively integrated to answer the research question?**	**5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?**	**5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?**	**5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?**
Fain (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hunter (2012)	Yes	Yes	Yes	Yes	Yes	Can't tell	Can't tell

Pluye, P. & Hong, Q.N. (2014). Combining the power of stories and the power of numbers: Mixed Methods Research and Mixed Studies Reviews. *Annual Review of Public Health,* 35, 29-45.

Table S6. Themes associated with each TDF domains

	Description	Quotes
1. Knowledge		
Changes in guidelines (Barrier)	<u>Multiple sources/versions of guidance</u> Changes in antiviral guidance and multiple sources of information about antivirals presented a serious challenge to local health departments (LHDs). This was the most widely cited issue both early and late in the pandemic, and was described as 'very challenging' by more than a third of health departments. (Hunter, 2012) <u>Determining appropriate uses/recipients</u> State and federal antiviral guidance during H1N1 differed from what they had anticipated, particularly with respect to the target population for stockpiled antivirals. This discrepancy required their health departments to revise their planned activities to support this strategy (Hunter, 2012)	"Changing guidance made it difficult to determine appropriate recipients." (Hunter, 2012) "The drugs from the strategic national stockpile (SNS) were originally intended to [be] used only when the drugs were no longer available through the commercial market. During the H1N1 epidemic the state required that we make the drugs available to people who were unable to afford the meds." (Hunter, 2012) "The state's late decision to make the SNS antivirals available on a compassionate basis...created a great deal of trouble for my department." (Hunter, 2012) "...had this event been more widespread, guidance from the state could have caused considerable issues related to the first responder community." (Hunter, 2012)
4. Beliefs about capabilities		
Insufficient operational support (Barrier)	Relatively few pharmacists felt that their pharmacies had access to operational supports that could logically facilitate participation (SteelFisher, 2018a)	NR

Pharmacy capabilities (Facilitator)	Few pharmacists identified structural or service features at the pharmacy level that would help limit the crowding of sick patients during a pandemic flu and thus might make it easier or more appealing for pharmacies to participate in the future. (SteelFisher, 2018a)	NR
5. Optimism		
Pharmacists support (Facilitator)	Pharmacists were highly receptive to this alternative distribution and dispensing system as described. The vast majority thought it was a good idea (85%) and a good thing for the pharmacist profession (84%). Nearly all agreed it would strengthen the role of pharmacists during public health emergencies (96%) and their relationships with patients (93%). More than three-quarters agreed it would strengthen relationships with their local public health department, their state public health department, and physicians (84%, 78%, and 76%, respectively), though less than half ‘‘strongly agreed’’ this would strengthen relationships with any of these groups (46%, 40%, and 28%, respectively). (SteelFisher, 2018a)	NR
6. Beliefs about consequences		
Undue commercial influence (Barrier)	Roche directly (i.e. in its own name) lobbied the political and public health leadership (Tactic 1), urging them to swiftly sign the procurement agreement. Claiming that the drug would be delivered on a ‘first-come, first-served basis’, implying that should the agreement remain unsigned by a stipulated date, the company could not guarantee significant quantities in the near future (Vilhelmsson, 2018) Roche was alleged to have promoted Tamiflu by saying that Denmark was at heightened risk in the event of a major influenza outbreak because it had smaller Tamiflu stocks than other countries. (Vilhelmsson, 2018) The general view in retrospect was that Roche was successful in selling a product that the core group considered to be of limited and uncertain therapeutic benefit, and several were retrospectively self-	“…everybody who cared to look at the scientific material were convinced that for influenza, Tamiflu would represent a number of side effects and the benefit of Tamiflu might be almost next to nil.” (Informant 1) (Vilhelmsson, 2018) "…perhaps Roche was quite successful in convincing governments to stockpile oseltamivir…although it is not something we have discussed much within the group, my feeling is that they indeed were successful in their lobbying efforts and that many governments, including our own, bought too much Tamiflu or bulk oseltamivir." (Informant 5) (Vilhelmsson, 2018) "It was a huge pressure…Roche wrote a letter, as far as I remember either to the Danish Board of Health or the Ministry, saying that they were of course willing, within their limits, to be of use: they could offer some [quantities of the drug] but people

	critical regarding Denmark's antiviral procurement and deployment strategy. Almost all core pandemic group members suspected that lobbying by Roche had some effect on the amount of Tamiflu purchased or how quickly the agreement was signed (Vilhelmsson, 2018) Roche directly (i.e. in its own name) lobbied the political and public health leadership (Tactic 1), urging them to swiftly sign the procurement agreement. Claiming that the drug would be delivered on a 'first-come, first-served basis', implying that should the agreement remain unsigned by a stipulated date, the company could not guarantee significant quantities in the near future (Vilhelmsson, 2018)	would have to take it very seriously. They could make a special offer for time being—I've forgotten the English word for it—to be on the top of those who could queue up for buying substantial amounts of it. But "please hurry up, because the scenario may be absolutely changed in 2 weeks' time"'. (Informant 1) (Vilhelmsson, 2018) "…the Board of Health and the Ministry ended up buying under this pressure." (Informant 1) (Vilhelmsson, 2018)
Trust in public pharmacies (Facilitator)	Before costs were specified About a third said a 'major' reason is that they would trust pharmacies or the pharmacy staff more (33% and 30%, respectively) vs 24% saying that they would prefer public health clinics as they trust them more (28% said they would choose public health clinics as they have less trust in the private sector) (SteelFisher, 2018b) Before costs were specified Quarter mentioned 'major' reasons to prefer pharmacies related to management, 27% thought pharmacies would have better crowd control vs 28% for public health clinics (SteelFisher, 2018b) Before costs were specified less than a fifth saying a 'major' reason for choosing a pharmacy was that the antivirals would be safer or more effective (19% and 17%, respectively) (SteelFisher, 2018b)" Before costs were specified a quarter mentioned 'major' reasons to prefer pharmacies related to management, with 24% saying pharmacies would be less likely to run out of antivirals (34% said a 'major' reason to choose public health clinics is that they were less likely to run out of antivirals) (SteelFisher, 2018b)	NR
9. Goals		

Health equity (Facilitator)	Systems in place to prioritize high risk populations – equity considerations (Workneh, 2025)	"XX prioritized the First Nations communities in the eligibility criteria by reducing the age requirements to receive PaxlovidTM and ensuring that there were access points close to the communities." (Workneh, 2025) "The XX pathway is recommended for complex cases or unattached patients that cannot access a health care practitioners or patients that cannot access their primary care provider." (Workneh, 2025) "The XX was important in operationalizing the timely access to PaxlovidTM in long-term care facilities." (Workneh, 2025)
11. Environmental context and resources		

Antiviral costs (Barrier)	Economic imperatives rather than public health research evidence was the dominant influencing factor in target setting for population coverage (Pongcharoensuk, 2012) Before costs were specified, the most common 'major' reason for not going to a pharmacy was concern about higher costs than at a public health clinic, though less than half said this (43%) (12% who thought costs would be lower at the pharmacy). (SteelFisher, 2018b) - If the cost was free at both pharmacies and public health clinics: approximately three-quarters (74%) said they would most likely go to a pharmacy, and 16% said they would most likely go to a public health clinic - If pharmacies charged a dispensing fee of $5 to $8, while antivirals at a public health clinic remained free, the fraction saying they would most likely go to a pharmacy declined to 54%. - If the cost at a pharmacy rose to the commercial cost, in line with the way the public normally gets antivirals at pharmacies—a co-pay of $25 for those who are insured and full payment of up to $120 for those without insurance—the fraction saying they would most likely go to a pharmacy declined to 29%. (SteelFisher, 2018b) Those in lower income groups were more likely than those in higher income groups to choose public health clinics in all cost scenarios - When both location were free (26%) of those in the lowest income group said they would choose a public health clinic, compared to 7% of those with the highest income - When costs rose to a dispensing fee of $5 to $8, 54%of those with the lowest income who chose a public health clinic rose to more than half, compared to just 23% of those with the highest income - 79 of those with the lowest income chose a public health clinic when co-pays or full payment were required— substantially more than the highest income group (56%) (SteelFisher, 2018b)	NR

Staffing resources (Barrier)	Staffing/personnel issues Shortages of pediatric antivirals and staffing issues also remained significant challenges for local health departments throughout the pandemic (Hunter, 2012) Administrative hurdles (Hunter, 2012)	"H1N1 served as a 'dry run' for a more severe pandemic. Had we been faced with the need to distribute antiviral drugs to multiple health care and other venues, to a large percentage of our population, over a prolonged period of time, we would have been severely challenged to do so in a secure, accountable, consistent, and equitable manner. Given decreasing public health resources, I do not foresee an improvement in our capacity to do this anytime in the near future." (Hunter, 2012) "We [the local health departments] were advised [by the county] ...that the county would need to consider rapid purchase of antivirals for protection of essential county workers and possibly health care workers. We were asked to develop a special agreement to have local pharmacies make the purchase investment and guarantee them employee utilization and billing of insurance. At the start of the pandemic, this additional administrative task to avoid a sizeable county expenditure in antivirals for ongoing prophylaxis was an added task for our small health department." (Hunter, 2012)
Risk tolerance (Facilitator)	People should be able to obtain antivirals outside normal channels, even if the alternative strategies entail some 'risk'. All sites: 94% Chattanooga: 93% Fort Benton: 99% Los Angeles: 90% P-value =0.09 (Fain, 2014)	"Even if there are small risks to changing the ways people get prescription drugs, it is better for more people to be able to get antiviral drugs in time." (Fain, 2014)

Virtual and rapid distribution (Facilitator)	If a diagnosis of influenza was supported by a telehealth provider's review… a prescription for baloxavir marboxil was sent to the study pharmacy. (Heimonen, 2021) Rapid home delivery systems enabled timely access to antiviral medication after remote diagnosis: There were eight baloxavir home deliveries… 87.5% of home deliveries occurred within 3 hours from the time of baloxavir prescription. Availability of rapid antiviral delivery reduced delays between symptom onset and antiviral access: All eight individuals received drug within 48 hours of symptom onset. The remote antiviral distribution model demonstrated feasibility for epidemic or pandemic response strategies: This approach may be an important control strategy for influenza epidemics and pandemics. (Heimonen, 2021)	NR

Local provisions (Facilitators)	Pharmacists in independent and chain pharmacies were more likely than those in mass merchandiser settings to have access to more pharmacists, interns, and technicians. (SteelFisher, 2018a) Those in urban and suburban settings were also less likely than their rural counterparts to say their pharmacy currently delivered or would deliver in a pandemic. (SteelFisher, 2018a) Those in mass-merchandiser pharmacies were less likely to report having a sitting area compared to others. Those in mass-merchandiser, chain, and supermarket pharmacies were much less likely than those in independent pharmacies to offer home delivery now or in a pandemic. (SteelFisher, 2018a) Those in mass-merchandiser and independent settings were less likely than their counterparts to say their pharmacy dispensed antivirals during the H1N1 pandemic, and to have drive through windows, but were more likely to say that they had received antivirals from public health agencies during H1N1 than were their counterparts. The same was true of those in pharmacies filling fewer prescriptions a day. (SteelFisher, 2018a) Before costs were specified, nearly 8 in 10 (79%) said they would be most likely to go to a pharmacy rather than a public health clinic to get antiviral drugs for convenience: - nearly three-quarters (72%) of those who would choose a pharmacy saying a ‘‘major’’ reason would be that the location would be more convenient vs 24% choosing public health clinics as they thought they would have more convenient locations - about half saying that it would take less time (50%) vs 29% for public health clinics - the hours would be more convenient (44%) vs 23% choosing public health clinics as they thought they would have more convenient hours (SteelFisher, 2018b)	NR

Community approach (Facilitator)	Participants generally endorsed the strategy of encouraging community contacts (e.g., family, friends, neighbors) to pick up prescribed antiviral medications from pharmacies and deliver them to ill people at home All sites: 81% Chattanooga: 87% Fort Benton: 96% Los Angeles: 66% P-value =0.00 (Fain, 2014)	"Friends and neighbors should be asked to pick up and deliver prescribed antiviral drugs from a pharmacy for people sick with flu." (Fain, 2014)
12. Social influences		
Government decision-making hierarchies (Barrier)	The voice of the (Thai) Ministry of Finance dominated the public health debate and strongly influenced the final strategic direction taken (Pongcharoensuk, 2012)	NR
Manufacturer's influence on specialists (Barrier)	Roche tried to influence discussions via a third party (Tactic 2). Relatedly, some members of the core group suspected that certain doctors who argued strongly in favour of stockpiling were acting on behalf of the company. (Vilhelmsson, 2018)	"There was great pressure from many colleagues in the medical field to buy more antivirals, but I think it was a kind of lobbyism from the industry…I was called several times and had to talk to a lot of senior doctors in infectious disease, for example about the quantity [of the stockpile]." (Informant 4) (Vilhelmsson, 2018)

Multilateral collaborative practices (Facilitator)	Multilateral collaborative practices (Workneh, 2025)	"The collaboration with regional medical officers of Public Health was key to the rollout. As they strategized with pharmacy leads for distribution of PaxlovidTM, this collaboration helped identify gaps in distribution. The rollout created new partnerships with centres to widen reach and work in collaboration to close gaps, if any, in the service delivery of PaxlovidTM." (Workneh, 2025) "The excellent collaboration between pharmacists, physicians and nurses was fundamental to the success of the rollout. There was a medical advisory committee consisting of key stakeholders (pharmacists, physicians, and nurses) and there were numerous collaborative discussions to not deplete the PaxlovidTM supply quickly" (Workneh, 2025)
13. Emotion		
Fear of personal repercussions (Barrier)	Despite overall support for the idea, sizable fractions of pharmacists said they had worries about the alternative distribution and dispensing system. The top worries were that facing shortages of the antivirals would frustrate patients (81%) and the risk of bringing back influenza virus to their families (71%). Fewer, but still more than half, were worried about their own exposure to the influenza virus (59%) (SteelFisher, 2018 (pharmacist))	NR
Fear of major outbreak (Barrier)	Roche was alleged to have promoted Tamiflu by saying that Denmark was at heightened risk in the event of a major influenza outbreak because it had smaller Tamiflu stocks than other countries. (Vilhelmsson, 2018)	"By “touring” I mean—they did the same thing in neighbouring countries—I had the impression that after one country had bought a certain amount, they used it [as an argument] to push other countries and vice versa, and they would lobby this by all means…I remember at one stage they flagged that Norway had stocked up and so should we, and later that Norway had purchased more than Denmark so we should buy more too." (Informant 2) (Vilhelmsson, 2018)