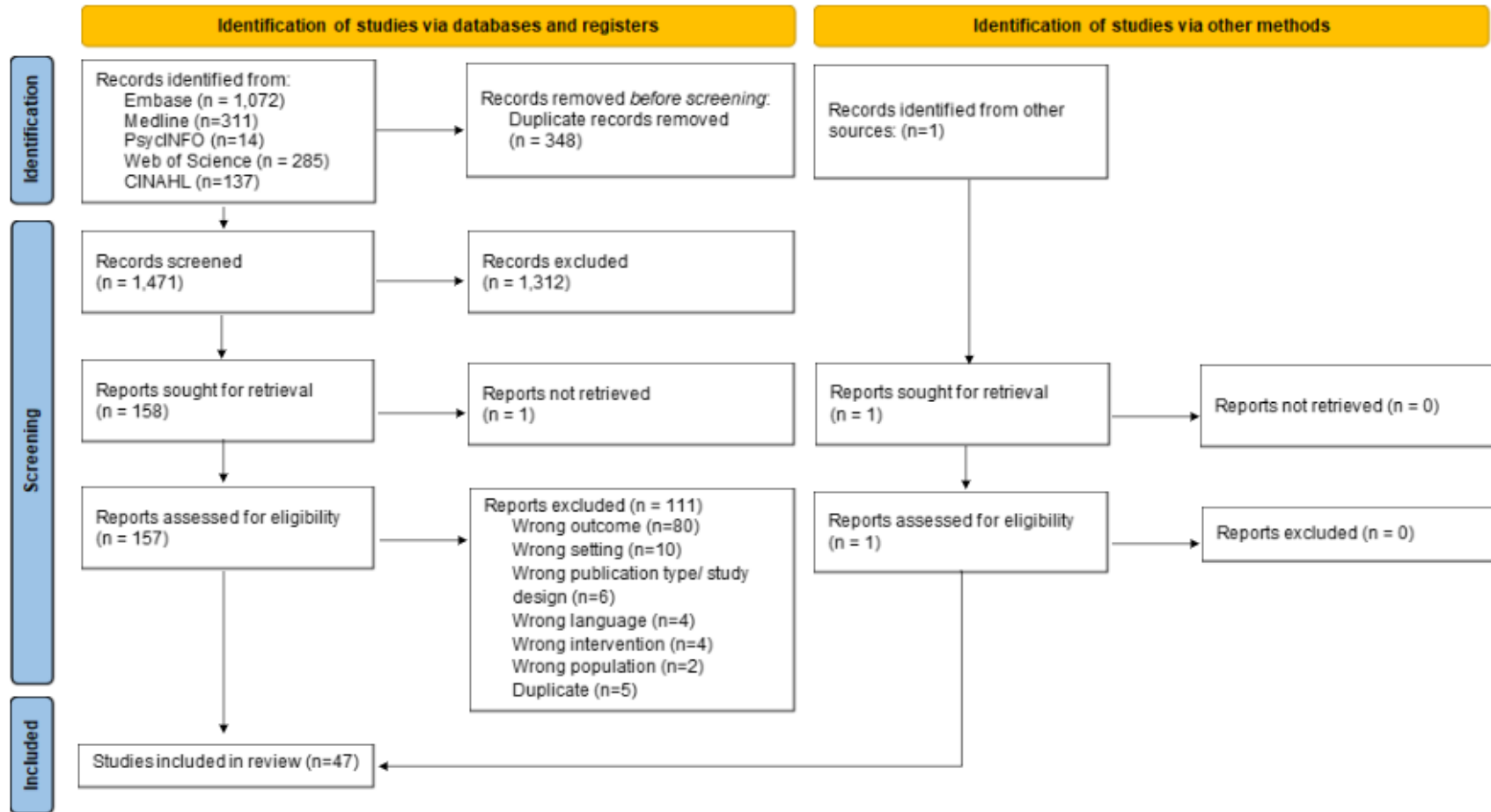


Figure 1

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	<ul style="list-style-type: none"> Healthcare practitioners (HCPs)* Patients (all ages) <p>HCPs will be defined as health care workers with prescribing powers (e.g., physicians, pharmacists, and nurses)</p>	<ul style="list-style-type: none"> Animals, in vitro The type of HCP included does not have prescribing power for antivirals for humans (e.g., veterinarian, ophthalmologist, audiologist, chiropractor) Does not involve any HCP nor patients
Intervention	<ul style="list-style-type: none"> Antivirals against influenza (e.g., oseltamivir, zanamivir, baloxavir marboxil and peramivir) Antivirals against influenza-like illnesses (e.g., ribavirin, remdesivir, molnupiravir, Nirmatrelvir/ritonavir [Paxlovid]). 	<ul style="list-style-type: none"> Not about antivirals Not about the use of antivirals or the prescription of antivirals
Disease	Respiratory viruses associated with severe disease (e.g., influenza, RSV, SARS, MERS)	Non-respiratory viruses (HIV, hepatitis, HPV...)
Study types/designs included	<ul style="list-style-type: none"> Cohort studies Case-control studies Observational studies Quasi-experimental studies Experimental studies Randomized control trials Case reports/case series Qualitative studies Mixed methods 	<ul style="list-style-type: none"> Literature reviews Opinion papers Conference abstract Protocol Thesis Book chapters Modelling studies
Language	Reports in French or English	Reports in other languages than French or English
Setting	<p>Pandemic or non-pandemic setting</p> <p>Community or outpatient setting (including the ER, unless specifically mentioned that patients were hospitalised)</p>	<p>In-patient hospitals settings or long-term care homes</p> <p>Provides data for both inpatient and outpatient but it does not provide them separately</p>
Outcome	Behavioural factors influencing HCPs' and patients' use and prescription of antivirals	Not about behavioural factors influencing HCP's and patients' use and prescription of antivirals

COVID-19: Coronavirus Disease 2019, HCP: Healthcare practitioner, 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 "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 Rapiwab 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 S-033188 or Xofluza or S-033447).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 "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 Tribarivir 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. ("health care practitioner*" or "healthcare practitioner*" or clinician* or physician* or doctor* or nurse* or HCP or pharmacist*).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. (attitude or perception or belie* or barrier* or facilitator* or enablers* or prescription or uptake or utili?ation or adoption or "decision making" or "clinical decision*").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. Health Knowledge, Attitudes, Practice/ or Perception/
20. Attitude of Health Personnel/
21. (17 and (18 or 19)) or 20
22. ("public perception" or "public attitude" or "patient perception" or "patient attitude" or "patient belie*" or "public adoption" or "public utili?ation" or "patient uptake").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]
23. Patient Acceptance of Health Care/
24. 5 and 16 and 21
25. 5 and 16 and (22 or 23)
26. (14 or 15) and 21
27. (14 or 15) and (22 or 23)
28. 24 or 25 or 26 or 27

29. 28 not (HIV or hepatitis or herpes).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]
30. limit 29 to yr="1988 -Current"

Medline

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 "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 Rapiab 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 S-033188 or Xofluza or S-033447).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 "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 Tribarivir 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. ("health care practitioner*" or "healthcare practitioner*" or clinician* or physician* or doctor* or nurse* or HCP or pharmacist*).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. (attitude or perception or belie* or barrier* or facilitator* or enablers* or prescription or uptake or utilization or adoption or "decision making" or "clinical decision*").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. Health Knowledge, Attitudes, Practice/ or Perception/
20. Attitude of Health Personnel/
21. (17 and (18 or 19)) or 20
22. ("public perception" or "public attitude" or "patient perception" or "patient attitude" or "patient belie*" or "public adoption" or "public utilization" or "patient uptake").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]
23. Patient Acceptance of Health Care/
24. 5 and 16 and 21
25. 5 and 16 and (22 or 23)
26. (14 or 15) and 21

27. (14 or 15) and (22 or 23)
28. 24 or 25 or 26 or 27
29. 28 not (HIV or hepatitis or herpes).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]
30. limit 29 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 "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
11. "cap-dependent endonuclease inhibitor"
12. MH (baloxavir)
13. "Baloxavir marboxil" OR Baloxavir OR S-033188 OR Xofluza OR S-033447
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 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 Tribavirin OR RBV OR Virazole
16. (S6) OR (S7) OR (S8) OR (S9) OR (S10) OR (S11) OR (S12) OR (S13)
17. "health care practitioner*" OR "healthcare practitioner*" OR clinician* OR physician* OR doctor* OR nurse* OR HCP OR pharmacist*
18. attitude OR perception OR belie* OR barrier* OR facilitator* OR enablers* OR prescription OR uptake OR utilization OR adoption OR "decision making" OR "clinical decision"
19. MH (Health Knowledge, Attitudes, Practice) OR MH (Perception)
20. MH (attitude of health personnel)
21. (S17 AND (S18 OR S19)) OR S20
22. "public perception" OR "public attitude" OR "patient perception" OR "patient attitude" OR "patient belie*" OR "public adoption" OR "public utilization" OR "patient uptake"
23. MH ("Patient Acceptance of Health Care")
24. S5 AND S16 AND S21
25. S5 AND S16 AND (S22 OR S23)
26. (S14 OR S15) AND S21
27. (S14 OR S15) AND (S22 OR S23)
28. S24 OR S25 OR S26 OR S27
29. S28 NOT (HIV OR hepatitis OR herpes)

Apply 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 "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 Rapiab 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 S-033188 or Xofluza or S-033447).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 "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 Tribavirin 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. ("health care practitioner*" or "healthcare practitioner*" or clinician* or physician* or doctor* or nurse* or HCP or pharmacist*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
13. (attitude or perception or belie* or barrier* or facilitator* or enablers* or prescription or uptake or utilization or adoption or "decision making" or "clinical decision*").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
14. health knowledge/
15. Perception/
16. Health Personnel Attitudes/
17. (12 and (13 or 14 or 15)) or 16
18. ("public perception" or "public attitude" or "patient perception" or "patient attitude" or "patient belie*" or "public adoption" or "public utilization" or "patient uptake").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
19. client attitudes/
20. 3 and 11 and 17
21. 3 and 11 and (18 or 19)
22. 10 and 17
23. 10 and (18 or 19)
24. 20 or 21 or 22 or 23
25. 24 not (HIV or hepatitis or herpes).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh word]
26. limit 25 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 Rapiab 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 Tribavirin 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 Tribavirin or RBV or Virazole)
9. TS=("health care practitioner*" or "healthcare practitioner*" or clinician* or physician* or doctor* or nurse* or HCP or pharmacist*)
10. TS=(attitude or perception or belie* or barrier* or facilitator* or enablers* or prescription or uptake or utilization or adoption or "decision making" or "clinical decision*")
11. #9 and #10
12. TS=("public perception" or "public attitude" or "patient perception" or "patient attitude" or "patient belie*" or "public adoption" or "public utilization" or "patient uptake")
13. #2 or #3 or #4 or #5 or #6 or #7
14. #1 AND #13
15. #8 OR #14
16. #11 OR #12
17. #15 AND #16
18. #17 NOT TS=(HIV or herpes or hepatitis)

Table S3*List of Articles Excluded During Full Text*

Author (Year)	Title	Reason for exclusion
Adams, K. (2025)	Patterns in Prescribing and Dispensing Influenza Antivirals Among Adults With Influenza Presenting to Urgent Care and Emergency Department Settings: VISION Network, 2023-2024.	Wrong outcome
Aiello A. (2011)	Resilience training for hospital workers in anticipation of an influenza pandemic	Wrong population
Akhmedov M. (2020)	Respiratory syncytial virus and human metapneumovirus after allogeneic hematopoietic stem cell transplantation: Impact of the immunodeficiency scoring index, viral load, and ribavirin treatment on the outcomes	Wrong outcome
Amaeze O. (2022)	Community pharmacists' services during the COVID-19 pandemic: A case study of Lagos State, Nigeria	Wrong intervention
Apisarnthanarak A. (2008)	Antiviral therapy for avian influenza virus (H5N1) infection at 2 Thai medical centers: Survey findings and implications for pandemic preparedness	Wrong setting
Azziz-Baumgartner E. (2023)	Healthcare personnel in 2016-2019 prospective cohort infrequently got vaccinated, worked while ill, and frequently used antibiotics rather than antivirals against viral influenza illnesses	wrong outcome
Balan, S (2025)	Drug-related problems and challenges encountered by pharmacists in nirmatrelvir/ritonavir counselling during the covid-19 pandemic: a multi-center study	Wrong outcome
Benirschke R.C. (2019)	Clinical Impact of Rapid Point-of-Care PCR Influenza Testing in an Urgent Care Setting: a Single-Center Study	wrong outcome
Blanchon T. (2015)	Use of neuraminidase inhibitors in primary health care during pandemic and seasonal influenza between 2009 and 2013	wrong outcome
Blaschke A.J. (2014)	A National study of the impact of rapid influenza testing on clinical care in the emergency department	Wrong outcome
Boehm K.M. (2010)	Seasonal and avian influenza knowledge base of attending physicians in a community-based hospital: a survey-based study	wrong publication type
Bose-Brill S. (2024)	Pediatric Nirmatrelvir/Ritonavir Prescribing Patterns During the COVID-19 Pandemic	wrong outcome
Bricaire F. (2003)	Patient perspective on zanamivir in the treatment of influenza (PharmaGRIPPE)	wrong outcome
Bricaire F. (2002)	Patient perspective on zanamivir in the treatment of influenza	wrong outcome
Caley M. (2010)	GPs' opinions on the NHS and HPA response to the first wave of the influenza A/H1N1v pandemic.	wrong outcome
CDC (2008)	Influenza-testing and antiviral-agent prescribing practices--Connecticut, Minnesota, New Mexico, and New York, 2006-07 influenza season	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
Cruz, AT (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	duplicate
Curnock E. (2002)	Older people's view on the treatment and prevention of influenza in older people [4]	Wrong publication type
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
Dasari S. (2023)	Streamlining Test-to-Treat: A Novel Care Delivery Model for Covid-19 Oral Antiviral Access to Close the Equity Divide in Los Angeles County.	wrong outcome

Dasari, S (2023)	Streamlining Test-to-Treat: A Novel Care Delivery Model for Covid-19 Oral Antiviral Access to Close the Equity Divide in Los Angeles County	Duplicate
De Masi, S (2010)	Issues about the implementation of the guideline "The management of influenza-like syndrome"	Wrong language
Deichmann K.A. (2009)	Impact of rapid influenza testing on physician prescribing behaviour. Results from a prospective study in German pediatric centers during the influenza season 2006/2007	Wrong language
Denning K. (2024)	Evaluation of physicians prescribing of COVID-19 guideline-directed outpatient treatments in a primary care walk-in clinic	wrong outcome
Dhillon K. (2026)	Development of a pharmacist-led drug interaction assessment service for patients with cancer diagnosed with mild to moderate COVID-19 infection requiring outpatient treatment	wrong outcome
Dima, A (2021)	Perceptions of Romanian Physicians on Lockdowns for COVID-19 Prevention	Wrong outcome
Docter S.P. (2011)	Public perceptions of pandemic influenza resource allocation: A deliberative forum using grid/group analysis.	wrong outcome
Dona D. (2023)	COVID-19 and MIS-C treatment in children-results from an international survey	wrong outcome
Dormuth C.R. (2025)	Patient-Reported Adverse Drug Events on Nirmatrelvir-Ritonavir: A Prospective Observational Study of a Pharmacist-Led Follow-Up and Monitoring Service	wrong outcome
Edeghere, O (2015)	Knowledge, attitudes, experience and behaviour of frontline health care workers during the early phase of 2009 influenza A(H1N1) pandemic, Birmingham, UK	wrong outcome
Evans C.T. (2006)	Influenza diagnosis and treatment in veterans with spinal cord injury	wrong outcome
Evans C.T. (2015)	Influenza antiviral treatment in spinal cord injury patients, 2007-2010	Wrong setting
Fain, BA (2014)	Facilitating Access to Antiviral Medications and Information During an Influenza Pandemic: Engaging with the Public on Possible New Strategies	wrong outcome
Famularo D.E. (2022)	Pharmacist-driven assessment and prescribing of COVID-19 therapeutics: A large, tertiary academic medical center's experience	wrong study design
Gauld, NJ (2012)	Five years of non-prescription oseltamivir: effects on resistance, immunization and stockpiling	wrong outcome
Green D.A. (2016)	Clinical Utility of On-Demand Multiplex Respiratory Pathogen Testing among Adult Outpatients.	wrong outcome
Hardin R. (2020)	Development and implementation of an influenza point-of-care testing service in a chain community pharmacy setting	wrong outcome
Havers, F (2014)	Use of Influenza Antiviral Agents by Ambulatory Care Clinicians During the 2012-2013 Influenza Season	wrong outcome
Hebert C. (2012)	The influence of context on antimicrobial prescribing for febrile respiratory illness: A cohort study	wrong outcome
Hernandez D.R. (2019)	Near point-of-care adoption of Cepheid Xpert Flu/RSV XC testing within an integrated healthcare delivery network	wrong outcome
Hersh A.L. (2011)	Antiviral prescribing by office-based physicians during the 2009 h1n1 pandemic	wrong outcome
Hippisley-Cox J. (2003)	The use of patient group directions for zanamivir in 2000/2001: Cross-sectional survey of primary care organisations in England	wrong outcome
Hohmeier K.C. (2022)	Implementing community pharmacy-based influenza point-of-care test-and-treat under collaborative practice agreement	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 Intervention

Huizar-Hernandez V. (2017)	Decision-making Process by Users and Providers of Health Care Services During the AH1N1 Epidemic Influenza in Mexico: Lessons Learned and Challenges Ahead	Wrong setting
Kamuhabwa A. (2012)	Health-care providers' preparedness for H1N1/09 influenza prevention and treatment in Dar es Salaam, Tanzania.	wrong outcome
Katz M.A. (2009)	Use of rapid tests and antiviral medications for influenza among primary care providers in the United States	Wrong setting
Klepser D.G. (2019)	Evaluation of a community pharmacy-based influenza and group A streptococcal pharyngitis disease management program using polymerase chain reaction point-of-care testing	wrong outcome
Klepser M.E. (2016)	Effectiveness of a pharmacist-physician collaborative program to manage influenza-like illness	Wrong outcome
Kravetz J.D. (2022)	Implementation of a standardized process for outpatient COVID-19 treatments at a Veterans Affairs medical center	wrong outcome
Kreslake, JM (2016)	The Intersection of Care Seeking and Clinical Capacity for Patients With Highly Pathogenic Avian Influenza A (H5N1) Virus in Indonesia: Knowledge and Treatment Practices of the Public and Physicians	wrong outcome
Kuehn B.M. (2011)	Antiviral drugs underused in US patients for 2009 influenza A(H1N1) pandemic	wrong publication type
Kuentzmann-Klein P. (2020)	Management of seasonal influenza by family physicians	wrong outcome
Kurazono K. (2022)	Comparison of Inconvenience Costs Between Influenza Antivirals for Japanese Pediatric Patients: A Conjoint Analysis of Parental Responses	Wrong outcome
La J. (2022)	Factors associated with the speed and scope of diffusion of COVID-19 therapeutics in a nationwide healthcare setting: a mixed-methods investigation	wrong outcome
Lautenbach E. (2010)	Initial response of health care institutions to emergence of H1N1 Influenza: Experiences, Obstacles, and perceived future needs	wrong outcome
Lee P.Y. (2002)	Economic analysis of influenza vaccination and antiviral treatment for healthy working adults.	wrong outcome
Liebenstein T. (2024)	Telemedicine for Prescribing Nirmatrelvir/Ritonavir: Safety, Logistics, and Challenges	Wrong outcome
Lieu, TA (2025)	Pharmacist vs physician management of e-visit requests for COVID-19 medication: A randomized clinical trial	Wrong outcome
Linder J.A. (2005)	Antivirals and antibiotics for influenza in the United States, 1995-2002	wrong outcome
Lora A.J.M (2023)	Remdesivir use and antimicrobial stewardship restrictions during the coronavirus disease 2019 (COVID-19) pandemic in the United States: A cross-sectional survey.	Wrong outcome
Manabe, T (2012)	Impact of Education and Network for Avian Influenza H5N1 in Human: Knowledge, Clinical Practice, and Motivation on Medical Providers in Vietnam	Wrong outcome
Mangiri A. (2017)	Physician's knowledge, attitudes, and practices regarding seasonal influenza, pandemic influenza, and highly pathogenic avian influenza A (H5N1) virus infections of humans in Indonesia	wrong outcome
Matas J.L. (2025)	Comparative analysis of influenza healthcare disparities in the United States using retrospective administrative claims from Medicaid and commercial databases, 2015-2019.	wrong outcome
Mermin-Bunnell K. (2023)	Use of Natural Language Processing of Patient-Initiated Electronic Health Record Messages to Identify Patients With COVID-19 Infection	wrong outcome
Mitchell S.L. (2018)	Implementation of a rapid influenza A/B and RSV direct molecular assay improves emergency department oseltamivir use in paediatric patients	wrong outcome
Mitchell S.L. (2018)	Implementation of a rapid influenza A/B and RSV direct molecular assay improves emergency department oseltamivir use in paediatric patients	Duplicate

Miyawaki A. (2024)	Physician characteristics associated with antiviral prescriptions for older adults with COVID-19 in Japan: an observational study	wrong outcome
Mueller M.R. (2010)	Influenza Testing and Antiviral Prescribing Practices Among Emergency Department Clinicians in 9 States During the 2006 to 2007 Influenza Season	Wrong setting
Munir M.Z. (2024)	Healthcare professionals' understanding and perception of drug-related issues linked to off-label pharmacological medications used for COVID-19	wrong outcome
Nagykaldi Z. (2010)	Facilitating patient self-management through telephony and Web technologies in seasonal influenza.	wrong outcome
Nguyen J. (2025)	Care at home for remdesivir treatment of COVID-19: a survey study of patient and physician experiences	Wrong setting
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 outcome
Ozawa S. (2022)	COVID-19 Treatments Sold Online Without Prescription Requirements in the United States: Cross-sectional Study Evaluating Availability, Safety and Marketing of Medications	wrong outcome
Papastergiou J. (2016)	Community pharmacy rapid influenza A and B screening.	Duplicate
Patel-Dovlatabadi P. (2014)	Factors associated with physicians' prescribing behavior for treatment of influenza in the USA	wrong outcome
Pérez-Landeiro A. (2025)	Nirmatrelvir/ritonavir prescription: A chance for pharmaceutical care via telemedicine	wrong outcome
Pérez-Landeiro A. (2025)	Nirmatrelvir/ritonavir prescription: A chance for pharmaceutical care via telemedicine	Duplicate
Phipps E. (2020)	Influenza in carehome residents: applying a conceptual framework to describe barriers to the implementation of guidance on treatment and prophylaxis	Wrong setting
Portman D.B. (2023)	Facilitating oral COVID-19 therapy utilization through a pharmacy consult service	wrong outcome
Potter J. (2025)	Impact of a pharmacist-led collaborative approach to care for treatment of COVID-19 in the outpatient setting	wrong outcome
Rasmussen, Sonja A (2012)	Practices of obstetrician-gynecologists regarding nonvaccine-related public health recommendations during the 2009 H1N1 influenza pandemic.	Wrong outcome
Rodriguez-Leal, C.M. (2025)	Antiviral prescription of mild to moderate COVID-19 and adherence to official recommendations in Spanish emergency departments.	wrong language
Rogan D.T. (2017)	Impact of rapid molecular respiratory virus testing on real time decision making in a pediatric emergency department	Wrong setting
Rothberg M.B. (2008)	Do pediatricians manage influenza differently than internists?	Wrong setting
Sagar A. (2023)	Use of Off-Label Drugs in COVID-19: Clinicians' Perceptions Based on a Cross-Sectional Observational Study.	Wrong setting
Sako A. (2022)	Prescription of anti-influenza drugs in Japan, 2014-2020: a retrospective study using open data from the national claims database	wrong outcome
Sansom B. (2025)	Health Care Workers' Perceptions of a Pharmacist-Led Collaborative Practice Agreement for Prescribing Nirmatrelvir/Ritonavir to Eligible Patients with COVID-19	wrong outcome
Sasaki T. (2012)	Reliability of a Newly-Developed Immunochromatography Diagnostic Kit for Pandemic Influenza A/H1N1pdm Virus: Implications for Drug Administration	wrong outcome
Schatz L. (2003)	Influenza diagnosis and treatment: Impact of new antivirals on perceived treatment behaviours during recent influenza outbreaks	wrong outcome

Schimmel J. (2024)	Remdesivir Discontinuation Decisions Based on Thresholds of Aminotransferase in an Observational Registry	wrong outcome
Seale H. (2009)	Will they just pack up and leave? Attitudes and intended behaviour of hospital health care workers during an influenza pandemic	wrong outcome
Seale H. (2010)	Examining the knowledge of and attitudes to pandemic influenza among general practice staff	Wrong outcome
Seale, Holly (2012)	Hospital health care workers' understanding of and attitudes toward pandemic influenza in Beijing.	Wrong outcome
Shaohua L. (2020)	Nationwide survey on clinical treatment of coronavirus disease 2019 in 9 provinces and municipalities	Wrong language
Shaukat H. (2023)	Practice patterns and perceptions of influenza testing amongst pediatric urgent care providers	Wrong outcome
Srey J. (2025)	Evaluation of pharmacist-prescribed nirmatrelvir/ritonavir for patients with COVID-19	wrong outcome
SteelFisher J.K. (2018)	Pharmacist Views on Alternative Methods for Antiviral Distribution and Dispensing During an Influenza Pandemic	Wrong intervention
Takemura Y. (2005)	Economic consequence of immediate testing for C-reactive protein and leukocyte count in new outpatients with acute infection	Wrong outcome
Thomas J. (2025)	Oral COVID-19 antiviral prescribing in Australian general practice - a retrospective observational study.	wrong outcome
Uzuner A. (2008)	Doctors' knowledge level and attitudes concerning avian influenza	Wrong outcome
Van Scoy L. (2023)	REQUESTS FOR IVERMECTIN AND HEALTHCARE DISTRUST IN THE RURAL SOUTH	Wrong intervention
Vardakas K.Z. (2016)	Impact of oseltamivir use on the reduction of complications in patients with influenza: a prospective study	Wrong outcome
Venkatesan S. (2019)	A novel framework for evaluating the impact of individual decision-making on public health outcomes and its potential application to study antiviral treatment collection during an influenza pandemic	wrong study design
Witsell D.L. (2002)	Physician perceptions about the flu: a survey of U.S. primary care providers.	wrong outcome
Woodman M. (2023)	Prescribing in a pandemic: Electronic prescribing aids to improve non-specialist adherence to COVID-19 guidelines	wrong population
Xie Y. (2026)	Impact of Real-Time, On-Demand Influenza and Respiratory Syncytial Virus Testing at Point-of-Care on Antibiotic Prescribing and Clinical Outcome in Pediatric Outpatients With Acute Respiratory Illness: A Prospective, Quasi-Randomized, Controlled Study	wrong outcome
Yan L. (2023)	Anti-SARS-CoV-2 Pharmacotherapies Among Nonhospitalized US Veterans, January 2022 to January 2023	wrong outcome
Yang S. (2020)	Multiplex Tests for Respiratory Tract Infections: The Direct Utility of the FilmArray Respiratory Panel in Emergency Department	wrong outcome
Zhonghua Y. (2024)	Expert Consensus on the Clinical Application of Oral Small-molecule Antiviral Drugs Against COVID-19	wrong publication type

Table S4*Description of Included Studies*

Author (year) - Country Study design	Population	Study duration	Objectives	Eligibility criteria	Sample size
Randomised controlled trial					
Bonner (2003) - United States RCT	Prescriber (emergency department)	The enrollment period was from the 19th of January to the 5th of March 2002	The aim of the study is to evaluate the effect of knowledge of a positive rapid influenza test on physician decision-making and patient management in the pediatric emergency department	All children between the ages of 2 months and 21 years who presented to the Children's Hospital of Alabama emergency department with a temperature of 100.4 °F or greater in the emergency department; had cough, coryza, malaise, headache, and/or myalgias; and had symptom duration of 72 hours or less. were eligible. However, children with immunosuppression secondary to drugs, malignancy, or HIV infection, or transplant recipients, were excluded from enrollment. Children who had already been evaluated for this illness or were on antibiotics at the time of evaluation in the emergency department were ineligible for enrollment.	391
D'Antoni (2019) - United Kingdom RCT	User	June 2016	The aim of the study is to see whether written health communications about pandemic influenza and prophylactic treatment with antivirals had an effect on people's intention to adhere to the recommendation	Members of the UK general public who were in adult age range (18-65years) and fluent in English were included in the study. However they were excluded if they had Incomplete or invalid questionnaires identified based on a response time approach (i.e. questionnaires completed in less than 5 minutes were removed (n = 36)); a long-string pattern approach (i.e. based on a cut-off long string-pattern of 14 consecutive identical answers (e.g. Curran, 2016) (n = 3)); and failure in the manipulation check items (n = 64).	216

				Participants who did not correctly recognized at least two of the three manipulation check items were also excluded	
Cohort studies					
Bromley-Dulfano (2025) - United States Retrospective cohort study	Prescriber (outpatient clinic or emergency department)	January 1st, 2022 to January 31st, 2024	The aim of the study is to examine the relative contribution of structural and encounter-level factors associated with racial and ethnic disparities in oral antiviral prescribing for COVID-19.	All patient aged 18 years or older who received an order for a COVID-19 test in an outpatient clinic or emergency department or has a free standing antiviral prescription were included in the study. The main analysis focused on patients who tested positive. However, the sample was limited to outpatient practices with at least 25 documented COVID-19 test orders in the EHR during the study period	201,964
El Feghaly (2021) - United States Prospective cohort study	Prescriber (physicians and nurses in the emergency department or urgent care clinic) - Advanced practice registered nurse (n=126 encounters) - Doctor of osteopathic medicine or Doctor of medicine (n=213 encounters)	February 18th, 2019, to March 13th, 2019	The aim of the study is to measure the impact of rapid RT-PCR testing for influenza on patient management in busy pediatric ED and urgent care clinic settings	Clinicians who ordered an RT-PCR at their tertiary care pediatric medical center with 2 EDs and 3 urgent care clinics were included in the study	339 encounters
Gaillat (2005) - France Prospective cohort study	Prescriber (general practitioners)	February 7th to May 30th 2003	The aim of the study is to describe in real-life conditions the flu therapeutic management, motivations to prescribe or not NAI (General Practitioners'	GPs who had previously filled a questionnaire regarding their practice around flu and patients aged more than 1 year who consented to being part of the study were included.	305 GPs and 660 patients

			(GPs) characteristics, decisional factors) and treated patients' course.		
Hart (2024) - United States Retrospective cohort study	Prescriber (clinical pharmacists)	July 3rd, 2022 to March 31st, 2023	The aim of the study is to evaluate the impact of a clinical pharmacist COVID-19 treatment consult service.	Patients were included in the analysis if they tested positive for COVID-19 either by home or by laboratory testing between July 3, 2022, through March 31, 2023, and contacted their primary care provider to determine treatment options.	3 geriatric clinical pharmacists and 124 patients
Komiya (2025) - Japan Pre-post study	Prescriber (physicians) - 996 (66.4%) generalists - 228 (15.2%) pulmonologists - 136 (9.1%) otolaryngologists - 15 gastroenterologists - 12 pediatricians - 12 psychiatrists - 11 cardiologists - 10 orthopedic surgeons - 10 neurologists - 10 gastrointestinal surgeons - 60 physicians from other specialties	Some time between 2020-2025	The aim of the study is to assess the antiviral prescription patterns among physicians managing COVID-19 patients before and after watching an educational film with 16 fictitious scenarios	Japan-based physicians who were members of the PLAMED platform were included in the study	1,500
Linder (2009) - United States	Prescriber (primary care physician)	October 1st, 1999 to May 31st, 2007	The aim of the study is to measure the rate of antiviral and antibiotic prescribing, the appropriateness of antiviral	Visits with an ICD-9-CM code of 487 (influenza or influenza-like diagnosis) that occurred during the influenza seasons (from October 1st to May 31st of the following	284

Retrospective cohort study			prescribing, and evaluate independent predictors of antiviral and antibiotic prescribing for influenza in primary care.	calendar year). between October 1, 1999 and May 31, 2007 were included along with primary care visits associated with a same-day electronic antiviral prescription of one of the 4 approved anti-influenza, anti-viral medications: amantadine, rimantadine, oseltamivir, and zanamivir. However, visits to non-primary care clinics (e.g., emergency department visits), follow-up visits, and visits that did not occur during the influenza seasons were excluded	
Linder (2006) - United States Retrospective cohort study	Prescriber (primary care clinics)	4 influenza seasons (1st of October to 31st of May) from the 2000-2001 season to the 2003-2004 season	The aim of the study is to measure the rate and appropriateness of antiviral and antibiotic prescribing for influenza	Visits by patients aged younger than 18 years old, visits for which we could find no associated visit note and duplicate notes, and visits where antivirals were prescribed for multiple sclerosis, Parkinson's disease, or influenza prophylaxis were excluded.	127
Nakajima (2021) - Japan Retrospective cohort study	Prescriber (emergency department)	September 2018 to May 2019	The aim of the study is to identify the role of clinical information and physicians' experience in the initiation and prescription of anti-influenza agents in patients undergoing rapid influenza diagnostic tests (RIDTs) in a Japanese emergency department.	Walk-in patients older than 15 years who underwent RIDTs during the study period were included in the study. However, patients who underwent simultaneous additional tests for severe differential diagnoses; patients with prolonged symptoms and previous consultation within 2 weeks; transferred patients; and patients prescribed antibiotics were excluded.	380
Papastergiou (2016) - Canada Prospective cohort study	Prescriber (community pharmacists)	December 12, 2014 to February 4, 2015	The aim of the study is to investigate the impact and feasibility of community pharmacist-directed influenza screening and to evaluate the proportion of influenza-positive cases that resulted in the	Patients aged 5 years and older with symptoms suggestive of influenza were included: "no patient was refused access to the service"	59

			initiation of antiviral therapy by pharmacists.		
Park (2019) - South Korea Retrospective cohort study	Prescriber (emergency department)	October 2010–March 2011 October 2011–March 2012 October 2012–March 2013	The aim of the study is to evaluate the effect of rapid influenza diagnostic tests (RIDTs) on ED patient management over three influenza seasons after 2009 and identify factors associated with treatment choice for influenza-like illness.	Patients older than 15 years who underwent RIDT in the ED before discharge without admission were included in the study. Patients were also required to have ILI symptoms: ILIs was defined as a fever greater than 37.8°C with one or more respiratory symptoms in the absence of other causes. Patients who were admitted, transferred, or died, were younger than 15 years, or whose final diagnosis was unlikely to be acute respiratory tract infection were excluded.	453
Peters (2013) - United States Prospective cohort study	Prescriber (emergency department)	September 1, 2009 through May 19, 2010 and November 1, 2010 through April 30, 2011	The aim of the study is to describe patterns of rapid influenza test ordering, diagnosis of influenza, and antiviral prescribing by the treating physician for children and adults presenting to emergency departments (EDs) with fever and acute respiratory symptoms	Children and adults were eligible for enrollment if they presented to the ED with any of the following symptoms: fever, cough, nasal congestion, difficulty breathing, earache, sore throat, or wheezing. Eligible patients resided in Forsyth County or one of its seven contiguous North Carolina counties, and provided consent in English or Spanish. Eligible patients were systematically approached during daytime hours Monday through Thursday. Patients with only fever and an identified non-respiratory source of fever, e.g. abscess or urinary tract infection, were excluded	1,657
Suryaprasad (2014) - United States Retrospective cohort study	Prescriber (undescribed)	May to December 2009	The aim of the study is to estimate the contribution of RIDT results to AV treatment decisions, IHS retrospectively analyzed ILI case data from four southwestern IHS facilities to measure the association among an RIDT result, presence	Patients with documented ILI (temperature >100°F and cough or sore throat) were included in the study. However, if a rapid test was performed >48 hours after symptom onset (n=186), symptom onset was missing (n=43), the RIDT date preceded symptom onset (n=1),	521

			of risk factors, and receipt of early AV therapy.	or AVs were started before the RIDT (n=1) the patients were excluded.	
Theocharis (2010) - Greece Prospective cohort study	Prescriber (physicians who do house calls)	January 1st, 2009 to 30th of May 2009	The aim of the study is to systematically collect and analyze the data on the use of a rapid diagnostic test for seasonal influenza A and B in patients with specific respiratory symptoms that sought medical services from a network of doctors that performs house-call visits in the area of Attica, Greece.	Patients of all ages that sought medical services from the network of SOS doctors in Attica, Greece during the period from 01/01/2009 to 30/05/2009, that complained of respiratory/influenza-like symptoms. These could include fever >38 °C, cough, and at least one of the following: sore throat, nasal discharge, muscle aches, headache, or fatigue.	3,412 eligible patients 197 of which were tested and 184 which the test result was available
Mixed methods					
Sansom (2025) - Canada Interview and Cross sectional survey	Prescriber (Pharmacy Assessment Clinic [PAC] pharmacists and doctors and community pharmacists) 10 PAC pharmacists 10 community pharmacists 1 PAC physician 2 nurse pre-screeners	1 week in early 2022 and referrals from January 24 to July 22, 2022	The aim of the study is to evaluate how health care workers involved with the PAC perceived the implementation and impact of this innovative care model.	PAC pharmacists, PAC physicians, community pharmacists initially eligible to dispense nirmatrelvir/ritonavir, and nurse pre-screeners were included in the study. However, Three PAC pharmacists (B.S., B.B.A., H.K.N.) were members of the research team and therefore excluded from responding to the survey.	23
Cross sectional survey					
Barthe (2011) - France Cross sectional survey	Prescriber (self employed general practitioners)	15th of July 2010 to 15th of September 2010 (phone calls to	The aim of the study is to describe the perception of neuraminidase inhibitors (NAIs) during the pandemic A (H1N1)	Self employed general practitioners in metropolitan France	161

		invite them to fill in an online survey)	2009 influenza among general practitioners.		
Basset (2025) - United States Cross sectional survey	Prescriber (physicians) General practitioner: 231 (54.0%) Pediatric emergency medicine (PEM): 142 (33.2%) Pediatric infectious disease (PID): 55 (12.9%)	March 25th to June 12th, 2024	The aim of the study is to explore clinicians' perspectives on the need for and design of additional randomized controlled trials for oseltamivir in the outpatient setting, including clinical outcomes of most importance.	Eligible participants from each site including all attendings, fellows, and advanced practice providers from GP, pediatric emergency medicine (PEM), and pediatric infectious disease (PID) were included in the study	428
Biggerstaff (2014) - United States Cross sectional survey	Prescriber (undescribed)	January 2011 to April 2011	The aim of the study is to assess whether ACIP treatment guidelines were followed during the 2009 influenza pandemic. In this study, they repeated the telephone survey during the 2010–2011 influenza season to determine if the previous findings would be consistent during a seasonal influenza epidemic and to assess the time to seek healthcare, which was not collected in the previous survey.	Non-institutionalized US population aged 18 years or older were included in the study. Data on children was collected by asking adults about their children.	75,088 adults and 15,649 children
Dharan (2010) - United States Two cross sectional surveys	Prescriber (infectious disease physicians)	2009 (once in January and another in April)	The aim of the study is to understand whether the interim guidelines released in December 2008 were effectively communicated and could be implemented, we	Infectious disease physicians who were members of the EIN were included in the study	- January to Feb. 2009: 646 - April to May 2009: 350

			surveyed infectious disease physicians about their antiviral prescribing practices: in January 2009, regarding the prior 2007–08 influenza season, and again in April 2009, regarding the concurrent 2008–09 influenza season, prior to the circulation of pandemic influenza A(H1N1)		(302/350 in the second period had also responded to the first questionnaire)
Dolan (2012) - United States Cross sectional survey	Prescriber (pharmacists)	January 21st to February 9, 2010	The aim of the study is to better understand pharmacists' knowledge, attitudes, and practices regarding vaccination and treatment of influenza (seasonal and H1N1) to determine barriers to vaccination and early treatment of pregnant women and identify useful information to include in further education programs for pharmacists.	Surveys were sent to pharmacists who were categorized as practicing in chain pharmacies (four or more units) or supermarket, mass merchandise, and independent pharmacies (one to three units), according to the APhA database	600
Gaglia (2007) - United States Cross sectional survey	User	April to June 2006	The aim of the study is to describe patient knowledge and attitudes regarding antiviral medications and to identify demographic and clinical characteristics associated with higher levels of knowledge regarding antiviral medication. We also sought to examine the proportion of patients who would report calling their physician within 48 h after the onset of influenza-like illness.	Patients at check-in at an urban, university-affiliated general medicine clinic in Pittsburgh, Pennsylvania were included in the study.	280

Helfenberger (2010) - Switzerland Cross sectional survey	User (Swiss business travelers)	February to April 2009	The aim of the study is to determine the knowledge, attitudes, and practices of Swiss business travelers with regard to influenza and the use of antiviral medication.	Users who's business as the main purpose of the trip and permanent residency in Switzerland were included in the study	661
Lonsdale (2011) - United Kingdom Cross sectional survey	User	August and September 2009	The aim of the study is to evaluate the circumstances in which patients requested antivirals for swine influenza during the H1N1 influenza pandemic of 2009, and to assess severity and duration of symptoms, compliance, side effects, patient perceptions and treatment effectiveness.	Patients who had received an antiviral at one of the antiviral collection points within NHS North Lancashire boundaries during the months of August and September 2009 were included in the study. However for the effectiveness of treatment analysis, patients were excluded if they had not completed the course of antivirals and supplied the data needed	188 (62 in the effectiveness of treatment analysis)
Masuet-Aumatell (2013) - United Kingdom Cross sectional survey	User (travelers)	September 2009	The aim of the study is to understand whether travellers would use antiviral therapeutic and stand-by treatment to treat infection with influenza if these were dispensed as part of a travel health consultation	All travellers who attended the Royal Free Travel Clinic during the study period were included in the study, but only one traveller per family could be included	96
Moller (2023) - Australia Retrospective analysis	Prescriber (general practitioners in training)	2010 to 2019	This study aims to establish prevalence and associations of (1) influenza and influenza- like illness (ILI) presentations to Australian general practice (GP) registrars (trainees) and (2) the use of neuraminidase inhibitors (NAIs) by GP registrars for new presentations of ILI, for the 10 years leading	General practitioners (GPs) in training part of the Registrar Clinical Encounters in Training (ReCEnT) study were included in the study	2,839

			up to the COVID- 19 pandemic in Australia (2010–2019)."		
Murtough (2015) - United States Cross sectional survey	Prescriber (obstetrician-gynecologists)	June to December 31st, 2011	The aim of the study is to investigate influenza prevention and treatment practices (knowledge, attitudes and practices) of obstetrician-gynecologists (ob-gyns) during the influenza season immediately following the 2009–2010 H1N1 season	Ob-gyns who were currently involved in treating pregnant patients were included in the study.	956
Okada (2021) - Japan Cross sectional survey	User (healthcare workers) - Physicians: 46.9% (n=61) - Nurses: 33.8% (n=44) - Other HCP: 19.2% (n=25)	2016 and 2017 season	The aim of the study is to retrospectively analyse adherence to PEP in healthcare workers by using questionnaires and determine the factors that prevent PEP adherence.	HCP who had contact with influenza persons within 2 months without a surgical mask regardless of vaccination were eligible for PEP	221
Quinn (2009) - United States Cross sectional survey	User	Between June 3, 2009, and July 6, 2009	The aim of the study is to examine the public's willingness to accept the use of an EUA (Emergency Use Authorizations) vaccine and drug; (1) examine public attitudes toward the use of a new H1N1 vaccine or drug, (2) explore worry and willingness to take an EUA drug for oneself and one's child, and (3) examine the impact of specific allowable conditions for distribution of an EUA on	Adults 18 years old or older could be included in the study drawn from a representative U.S. population.	1,543

			willingness to accept such a drug or vaccine"		
Quinn (2015) - United States Cross sectional survey	User	January 22nd to February 1st, 2010	The aim of the study is to examine factors associated with public willingness to take peramivir, an antiviral made available under Emergency Use Authorization during the 2009 H1N1 pandemic.	Participants from the 3 largest US racial/ethnic groups: white non-Hispanic, black non-Hispanic, and Hispanic adults in the Knowledge Networks panel were included in the study. Other racial/ethnic groups were not included in subgroup analyses because of insufficient numbers.	2,042
Rothberg (2006) - United States Cross sectional survey	<p>Prescriber (physicians in the Departments of Medicine, Pediatrics, Family Practice, and Emergency Medicine)</p> <p>Internal medicine - Texas: n= 36 (23%) - Massachusetts 67 (38%)</p> <p>Family practice - Texas: 58 (36%) - Massachusetts 4 (2%)</p> <p>Pediatrics - Texas: 35 (22%) - Massachusetts 72 (41%)</p> <p>Emergency medicine - Texas 26 (16%) - Massachusetts 15 (9%)</p>	<p>Recruitment: March and April of 2004.</p> <p>Study closed on 15 June 2004</p>	They conducted a survey of physician knowledge, attitudes, and practices regarding influenza diagnosis and treatment at Baystate Medical Center in Massachusetts and Scott & White Hospital and Clinic in Texas.	Physicians in the Departments of Medicine, Pediatrics, Family Practice, and Emergency Medicine at: Baystate Medical Center is an acute-care hospital providing primary and tertiary care to residents of western Massachusetts. Physicians affiliated with the medical center practice in 1 of the hospital's 3 neighborhood health centers or in private practices in the area. It comprises a 550-physician, multiple-specialty group practice; a 503-bed tertiary care hospital; and a self-contained health plan, were included in the study. Physicians were excluded if they did not have a valid e-mail address, were not involved in clinical care, or had a subspecialty practice in which they did not see patients with influenza.	336

	Medicine-pediatrics - Texas: 5 (3%) - Massachusetts 18 (10%)				
Samim (2022) - India Cross sectional survey	Prescriber (physicians) - Medicine: 109 (58.9%) - Pulmonology: 22 (11.9%) - Pediatrics: 18 (9.7%) - Critical care medicine: 14 (7.6%) - Others: 22 (11.9%)	April 18th to May 18th, 2021	The aim of the study is to analyze the current trends of evidence-based perspectives and practice among healthcare professionals of India involved in the management of COVID-19 on the use of remdesivir.	Respondents involved in the management of COVID-19 (Those not involved in the case management but not meeting the exclusion criteria were segregated into a control group) were included in the study. Only the respondents with correct answers to all the four questions on study outcome were included, forming the second inclusion criteria. However, incompletely filled questionnaires and responses from undergraduate medical students and interns were excluded.	185 34 individuals not involved in the management of COVID-19 were included as controls
Soh (2024) - Singapore Cross sectional survey	User	Between 29th August and 6th September 2022	The aim of the study is to identify factors associated with participants' awareness of Paxlovid, their acceptance of Paxlovid should it be prescribed, and their initiative to request Paxlovid if it is not offered by their healthcare provider. They also document possible reasons as to why our participants would not take Paxlovid.	Participants aged 16 years enrolled into the SOCRATES study, participants could complete the surveys in English or key local languages (Malay and Mandarin) were included in the study.	1,432
SteelFisher (2018) - United States Cross sectional survey	User	July 6th to August 13th, 2017	The aim of the study is to assess public views on government stockpiled antivirals and acceptability of dispensing antivirals through community	US adults aged 18 years and older could be included in the study.	1,300

			<p>pharmacies versus public health clinics during a severe influenza pandemic.</p> <p>(1) What is the public's reaction to the idea of government-stockpiled antivirals in a pandemic flu scenario?</p> <p>(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?</p> <p>(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?"</p>		
<p>SteelFisher (2024) - United States</p> <p>Cross sectional survey</p>	User	July 7th to 16th, 2023	The aim of the study is to inform policy makers and practitioners about awareness of Paxlovid and attitudinal barriers to uptake, with an eye toward communication efforts and policies promoting equitable and appropriate access to reduce severe COVID-19 illness and death in the future.	US adults aged 18 and older could be included in the study	1,430
<p>UpJohn (2012) - Australia</p> <p>Cross sectional survey</p>	<p>User (health care workers)</p> <p>-Nurse: 43% (n=16)</p>	The survey was conducted 5 months after the 2009	The aim of the study is to explore knowledge and beliefs about transmission and prevention of influenza	Any HCW with occupational exposure within the previous 48 hours was offered oseltamivir were included in the study	37

	-Doctor: 46% (n=17) -Dialysis technician: 11% (n=4)	pandemic influenza A (H1N1)			
Van Velzen (2011) - United Kingdom Cross sectional survey	User	2011	The objective of this study was to assess compliance to Oseltamivir and, the number of children developing adverse drug reactions (ADRs) and the reasons for stopping the course prematurely.	Children received Oseltamivir as treatment or prophylaxis were included in the study. However, children were excluded if it appeared they had not attended school after all or if the start or stop date of the medication was missing	102
Wang (2023) - United States Cross sectional survey	Prescriber (pharmacists)	Over 8 weeks, starting in August 2022 survey	The aim of this study is to characterize heterogeneity in Paxlovid prescribing processes across US healthcare facilities and evaluate associations between prescribing processes and perceived access barriers.	Eligible SRN healthcare facilities involved in multicenter research with sufficient responses on study covariates were included in the study. However, two facilities excluded because they answered insufficient covariate questions.	29 facilities
Williams (2014) - United States Cross sectional survey	Prescriber (outpatient facilities were physician offices, emergency departments, and federally funded community health centers)	2008 pre-pandemic survey and 2010 post-pandemic survey	The aim of the study is to determine RIDT use and antiviral prescription practices in outpatient facilities before and after the 2009 H1N1 pandemic.	Physicians from eligible outpatient facilities were physician offices, emergency departments, and federally funded community health centers responding to surveys. Ineligible facilities included those no longer in business, duplicates, wrong contact information, and non-English-speaking facilities.	2008: 2008 responses 2010: 869 responses
Qualitative studies					
Almahasis (2026) - United States Interviews	Prescriber (pharmacists)	June to September 2023	The study aimed to 1) describe the Paxlovid prescribing process in community pharmacies and 2) explore	Eligible pharmacists were those who played a decision-making role in Paxlovid prescribing	5

			associated barriers and facilitators		
Ahankari (2019) - India Interviews	Prescriber (physicians working in a primary care setting) 16 allopathic physicians (11 GPs, 3 paediatricians, 1 anaesthetist, 1 obstetrician/gynaecologist) 3 Ayurvedic practitioners 1 Homeopathic practitioner	May to September 2014	The aim of the study is to explore factors influencing diagnosis, treatment, referral and guideline use for influenza-like illness among healthcare practitioners working in a medically pluralistic setting.	MBBS, MD, Postgraduate Diploma in Medicine, BAMS, and BHMS practitioners working in primary care settings were included in the study. However, folk medicine practitioners were not included.	20
Dahri (2025) - Canada Interviews	Prescriber (community pharmacists)	May to September 2023	The aim of the study is to understand pharmacists' experiences, challenges, and attitudes with the nirmatrelvir/ritonavir rollout during the COVID-19 pandemic	Any pharmacist practising in a community pharmacy in BC were eligible to be included in the study	43
Gauld (2011) - New Zealand Interviews	Prescriber (pharmacists)	October 2007, interviews	The aim of the study is to explore the success of implementing (the off-prescription, rule-guided distribution of oseltamivir) through elucidating pharmacists' attitudes to and experiences of non-prescription supply of oseltamivir.	Pharmacies from high socio-economic or central business district locations and pharmacist attributes considered included age, gender, ethnicity, job title and experience.	26

Lynch (2012) - United States Focus groups	User (pregnant people)	September 2009	The aim of the study is to explore pregnant and recently pregnant women's perceptions of influenza vaccine and antivirals during the 2009 H1N1 pandemic	Pregnant or recently pregnant (within 6 months postpartum) women in Atlanta, Georgia; Dallas, Texas; and Portland, Oregon were included in the study	144
Mersereau (2012) - United States Focus groups	Prescriber (prenatal care providers) -17 Nurse practitioner -25 midwife -50 Physician	September 2009	The aim of the study is to explore the knowledge, attitudes, risk perception, barriers and behaviors of health care providers of pregnant women regarding seasonal and pH1N1 influenza; to identify misinformation, trusted sources, preferred information channels, and information needs and gaps; and to inform influenza emergency response strategies.	Prenatal care providers were eligible to be included in the study	92
Shaw (2016) - New Zealand Interviews	Prescriber (pharmacists)	October 2007	The study aims to identify and explore emergent barriers to consumers accessing oseltamivir without prescription following policy change introduced in New Zealand to increase access via community pharmacies.	26 pharmacists purposively sampled from 903 community pharmacies in NZ to reflect a maximum variation sample	26
Kunin (2015) - Australia, Israel and United Kingdom Interviews	Prescriber (HCP)	Australia: June, August and September 2010 Israel: July 2010	The aim of the study is to examine challenges faced by PCPs as they implemented pandemic policies in Australia, Israel and England before the 2009/A/H1N1 pandemic vaccine became available.	HCPs who practiced in areas with substantial 2009/A/H1N1 activity and/or started to consult the 2009/ A/H1N1 patients early in the pandemic outbreak. Moreover, HCPs who were more involved in implementing practice policy (for example, PCPs who directed the response of their practice to the pandemic) were included in the study.	65

References

1. Ahankari, A. S., Myles, P. R., Tsang, S., Khan, F., Atre, S., Langley, T., Kudale, A., & Bains, M. (2019). A qualitative study exploring factors influencing clinical decision-making for influenza-like illness in Solapur city, Maharashtra, India. *Anthropology & Medicine*, 26(1), 65–86. <https://doi.org/10.1080/13648470.2017.1321459>
2. AlMahasis, S. O., Qudah, B., Ford, J. H., & Mott, D. (2025). Inside the pharmacy: A qualitative study uncovering community pharmacists' experiences with Paxlovid prescribing. *Journal of the American Pharmacists Association*, 65(4), 102390. <https://doi.org/10.1016/j.japh.2025.102390>
3. Barthe, J., Noyelle, C., & Partouche, H. (2011). Médicaments antiviraux spécifiques de la grippe pendant la pandémie A(H1N1)2009: Usage et perception des médecins généralistes français. *Santé Publique*, 23(4), 305–315. <https://doi.org/10.3917/spub.114.0305>
4. Bassett, H. K., Rao, S., Beck, J., Brady, P. W., Jhaveri, R., Joerger, T., Liang, D., Quinonez, R., Shine, A., Somers, M., Lucas, B. P., & Schroeder, A. R. (2025). Clinician preferences for oseltamivir use in children with influenza in the outpatient setting. *Pediatrics*, 156(3), 1-9. <https://doi.org/10.1542/peds.2025-071193>
5. Biggerstaff, M., Jhung, M. A., Reed, C., Fry, A. M., Balluz, L., & Finelli, L. (2014). Influenza-like illness, the time to seek healthcare, and influenza antiviral receipt during the 2010–2011 influenza season—United States. *The Journal of Infectious Diseases*, 210(4), 535–544. <https://doi.org/10.1093/infdis/jiu224>
6. Bonner, A. B., Monroe, K. W., Talley, L. I., Klasner, A. E., & Kimberlin, D. W. (2003). Impact of the rapid diagnosis of influenza on physician decision-making and patient management in the pediatric emergency department: results of a randomized, prospective, controlled trial. *Pediatrics*, 112(2), 363–367. <https://doi.org/10.1542/peds.112.2.363>
7. Bromley-Dulfano, R., & Barnett, M. L. (2025). Racial inequities and access to COVID-19 Treatment. *JAMA Network Open*, 8(7), e2518459. <https://doi.org/10.1001/jamanetworkopen.2025.18459>
8. Dahri, K., Sinclair (Formerly MacNeil), K., Piszczek, J., Wilbur, K., Wong, B., Kuo, I. F., & Marra, F. (2025). Opportunities and challenges associated with the launch of nirmatrelvir/ritonavir (Paxlovid) in British Columbia during the COVID-19 pandemic: A qualitative study to explore community pharmacists' perspectives. *Canadian Pharmacists Journal / Revue Des Pharmaciens Du Canada*, 158(1), 55–65. <https://doi.org/10.1177/17151635241288577>
9. D'Antoni, D., Auyeung, V., & Weinman, J. (2019). The effect of framed health messages on intention to take antivirals for pandemic influenza: a vignette-based randomised controlled trial. *Journal of Health Communication*, 24(4), 442–455. <https://doi.org/10.1080/10810730.2019.1631914>
10. Dharan, N. J., Beekmann, S. E., Fiore, A., Finelli, L., Uyeki, T. M., Polgreen, P. M., & Fry, A. M. (2010). Influenza antiviral prescribing practices during the 2007–08 and 2008–09 influenza seasons in the setting of increased resistance to oseltamivir among circulating influenza viruses. *Antiviral Research*, 88(2), 182–186. <https://doi.org/10.1016/j.antiviral.2010.08.010>

11. Dolan, S. M., Cox, S., Tepper, N., Ruddy, D., Rasmussen, S. A., & MacFarlane, K. (2012). Pharmacists' knowledge, attitudes, and practices regarding influenza vaccination and treatment of pregnant women. *Journal of the American Pharmacists Association*, 52(1), 43–56. <https://doi.org/10.1331/JAPhA.2012.10141>
12. El Feghaly, R. E., Nolen, J. D., Lee, B. R., Abraham, G., Nedved, A., Hassan, F., & Selvarangan, R. (2021). Impact of Rapid Influenza Molecular Testing on Management in Pediatric Acute Care Settings. *The Journal of Pediatrics*, 228, 271–277.e1. <https://doi.org/10.1016/j.jpeds.2020.08.007>
13. Gaglia, M. A., Cook, R. L., Kraemer, K. L., & Rothberg, M. B. (2007). Patient knowledge and attitudes about antiviral medication and vaccination for influenza in an internal medicine clinic. *Clinical Infectious Diseases*, 45(9), 1182–1188. <https://doi.org/10.1086/522192>
14. Gaillat, J., Pecking, M., El Sawi, A., Grandmottet, G., Schlemmer, C., Barbaza, M.-O., & Carrat, F. (2005). Les inhibiteurs de la neuraminidase dans la grippe en médecine générale: Qui prescrit, quand et avec quels résultats? *Médecine et Maladies Infectieuses*, 35(9), 435–442. <https://doi.org/10.1016/j.medmal.2005.10.001>
15. Gauld, N., Kelly, F., & Shaw, J. (2011). Is non-prescription oseltamivir availability under strict criteria workable? A qualitative study in New Zealand. *Journal of Antimicrobial Chemotherapy*, 66(1), 201–204. <https://doi.org/10.1093/jac/dkq409>
16. Hart, C., Linnebur, S. A., & Fixen, D. R. (2024). Impact of a clinical pharmacist-led COVID -19 treatment consult service in two primary care seniors clinics. JACCP: *Journal of the American College of Clinical Pharmacy*, 7(6), 529–534. <https://doi.org/10.1002/jac5.1948>
17. Helfenberger, S., Tschopp, A., Robyn, L., Hatz, C., & Schlagenhauf, P. (2010). Knowledge, attitudes, and practices of business travelers regarding influenza and the use of antiviral medication. *Journal of Travel Medicine*, 17(6), 367–373. <https://doi.org/10.1111/j.1708-8305.2010.00467.x>
18. Komiya, K., Hagiwara, A., Shindo, Y., Takamatsu, K., Nishimura, N., Takechi, Y., Ichihara, E., Takazono, T., Izumi, S., Gotoh, S., Sakao, S., Izumo, T., Yamamoto, K., Yatera, K., Kakeya, H., Shibata, Y., Tomii, K., Sagara, H., Sasaki, Y., ... Ogura, T. (2025). Influence of educational films on antiviral prescription for COVID-19: Insights from web-based survey in Japan. *Antibiotics*, 14(3), 276. <https://doi.org/10.3390/antibiotics14030276>
19. Kunin, M., Engelhard, D., Thomas, S., Ashworth, M., & Piterman, L. (2015). Challenges of the pandemic response in primary care during pre-vaccination period: A qualitative study. *Israel Journal of Health Policy Research*, 4(1), 32. <https://doi.org/10.1186/s13584-015-0028-5>
20. Linder, J. A., Chan, J. C., & Bates, D. W. (2006). Appropriateness of antiviral prescribing for influenza in primary care: A retrospective analysis. *Journal of Clinical Pharmacy and Therapeutics*, 31(3), 245–252. <https://doi.org/10.1111/j.1365-2710.2006.00731.x>
21. Linder, J. A., Reyes Nieva, H., & Blumentals, W. A. (2009). Antiviral and antibiotic prescribing for influenza in primary care. *Journal of General Internal Medicine*, 24(4), 504–510. <https://doi.org/10.1007/s11606-009-0933-9>

22. Lynch, M. M., Mitchell, E. W., Williams, J. L., Brumbaugh, K., Jones-Bell, M., Pinkney, D. E., Layton, C. M., Mersereau, P. W., Kendrick, J. S., Medina, P. E., & Smith, L. R. (2012). Pregnant and recently pregnant women's perceptions about Influenza A Pandemic (H1N1) 2009: Implications for public health and provider communication. *Maternal and Child Health Journal*, 16(8), 1657–1664. <https://doi.org/10.1007/s10995-011-0865-y>
23. Lonsdale, J., & Way, R. (2010). Antivirals management in Lancashire during the 2009 swine flu pandemic. *The Pharmaceutical Journal*, 285, 176. <https://doi.org/10.1211/PJ.2011.11065033>
24. Masuet-Aumatell, C., Toovey, S., & Zuckerman, J. N. (2013). Prevention of influenza among travellers attending at a UK travel clinic: Beliefs and perceptions. A cross-sectional study. *Influenza and Other Respiratory Viruses*, 7(4), 574–583. <https://doi.org/10.1111/irv.12010>
25. Mersereau, P. W., Layton, C. M., Smith, L. R., Kendrick, J. S., Mitchell, E. W., Amoozegar, J. B., & Williams, J. L. (2012). Prenatal care providers and influenza prevention and treatment: Lessons from the field. *Maternal and Child Health Journal*, 16(2), 479–485. <https://doi.org/10.1007/s10995-011-0753-5>
26. Moller, C., Van Driel, M., Davey, A., Tapley, A., Holliday, E. G., Fielding, A., Davis, J., Ball, J., Ralston, A., Turner, A., Mulquiney, K., Spike, N., Fitzgerald, K., & Magin, P. (2023). Influenza presentations and use of neuraminidase inhibitors by Australian general practice registrars: A cross-sectional analysis from the ReCEnT study. *Family Medicine and Community Health*, 11(2), e002107. <https://doi.org/10.1136/fmch-2022-002107>
27. Murtough, K. L., Power, M. L., & Schulkin, J. (2015). Knowledge, attitudes, and practices of obstetrician-gynecologists regarding influenza prevention and treatment following the 2009 H1N1 Pandemic. *Journal of Women's Health*, 24(10), 849–854. <https://doi.org/10.1089/jwh.2014.5178>
28. Nakajima, K., Akebo, H., Tsugihashi, Y., Ishimaru, H., & Sada, R. (2020). Association of physician experience with higher prescription rate of anti-influenza agents in low-risk patients. *Internal and Emergency Medicine* 16(5), 1215-1221. <https://doi.org/10.22541/au.159769396.61891574>
29. Okada, N., Fujiwara, N., Azuma, M., Tsujinaka, K., Chuma, M., Yagi, K., Hamano, H., Aizawa, F., Goda, M., Kirino, Y., Nakamura, T., Zamami, Y., Hashimoto, I., & Ishizawa, K. (2021). Assessment of adherence to post-exposure prophylaxis with Oseltamivir in healthcare workers: A retrospective questionnaire-based study. *Biological and Pharmaceutical Bulletin*, 44(6), 869–874. <https://doi.org/10.1248/bpb.b21-00165>
30. Papastergiou, J., Folkins, C., Li, W., & Young, L. (2016). Community pharmacy rapid influenza A and B screening: A novel approach to expedite patient access to care and improve clinical outcomes. *Canadian Pharmacists Journal / Revue Des Pharmaciens Du Canada*, 149(2), 83–89. <https://doi.org/10.1177/1715163516629157>
31. Park, J.-H., Cho, H., Moon, S., Song, J.-H., Kim, J. Y., & Ahn, Y.-S. (2019). Effect of rapid influenza diagnostic tests on patient management in an emergency department. *Clinical and Experimental Emergency Medicine*, 6(1), 43–48. <https://doi.org/10.15441/ceem.17.281>

32. Peters, T. R., Suerken, C. K., Snively, B. M., Winslow, J. E., Nadkarni, M. D., Kribbs, S. B., & Poehling, K. A. (2013). Influenza testing, diagnosis, and treatment in the emergency department in 2009-2010 and 2010-2011. *Academic Emergency Medicine*, 20(8), 786–794. <https://doi.org/10.1111/acem.12175>
33. Quinn, S. C., Kumar, S., Freimuth, V. S., Kidwell, K. & Musa, D. (2009). Public willingness to take a vaccine or drug under emergency use authorization during the 2009 H1N1 Pandemic. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*, 7(3), 275-290. <https://doi.org/10.1089=bsp.2009.0041>
34. Quinn, S. C., Hilyard, K., Castaneda-Angarita, N., & Freimuth, V. S. (2015). Public acceptance of peramivir during the 2009 h1n1 Influenza Pandemic: Implications for other drugs or vaccines under emergency use authorizations. *Disaster Medicine and Public Health Preparedness*, 9(2), 166–174. <https://doi.org/10.1017/dmp.2014.156>.
35. Rothberg, M. B., Bonner, A. B., Rajab, M. H., Sun Kim, H., Stechenberg, B. W., & Rose, D. N. (2006). Effects of local variation, specialty, and beliefs on antiviral prescribing for influenza. *Clinical Infectious Diseases*, 42(1), 95–99. <https://doi.org/10.1086/498517>
36. Samim, M., Dhar, D., Singh, V., B.S, N., M.S, S., Dey, T., Parvin, N., Dutta, D., Shah, R. D., M, B., Goyal, S., Kariyappa, M., Saha, S., Goswami, P., Das, D., Shah, S., Kn, R., & Shekhar, J. (2022). CoRe study: COVID-19 and remdesivir: An insight into the current health planning and policy. *Journal of Family Medicine and Primary Care*, 11(8), 4671–4687. https://doi.org/10.4103/jfmprc.jfmprc_2368_21
37. Sansom, B., Adams, B., Canales, D., Doucette, D., Gagnon, J., LeBlanc, M., Levesque, J., Louis, F., MacLaggan, T., Naylor, H., & Nurse, B. (2025). Health care workers' perceptions of a pharmacist-led collaborative practice agreement for prescribing Nirmatrelvir/Ritonavir to eligible patients with COVID-19. *Canadian Journal of Hospital Pharmacy*, 78(1), e3596. <https://doi.org/10.4212/cjhp.3596>
38. Shaw, J. P., Gauld, N., & Kelly, F. (2016). Barriers to positive policy change that aims to increase access to medicines through reclassification: The case of oseltamivir in New Zealand. *International Journal of Pharmacy Practice*, 24(1), 6–12. <https://doi.org/10.1111/ijpp.12200>
39. Soh, S. E. A. M., Ong, W. L. B., Thein, T.-L., Griva, K., & Chen, I.-C. M. (2024). Insights from a community-based survey on factors influencing acceptance and uptake of Paxlovid (nirmatrelvir and ritonavir) as a COVID-19 antiviral medication in Singapore. *BMC Public Health*, 24(1), 2332. <https://doi.org/10.1186/s12889-024-19687-0>
40. SteelFisher, G. K., Caporello, H., Patel, A., Koonin, L. M., McGowan, E., Ben-Porath, E., & Blendon, R. J. (2018). 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>
41. SteelFisher, G. K., Findling, M. G., Caporello, H. L., Lubell, K. M., Lane, L., McGowan, E., Espino, L. C., Sutton, J., & Barnett, M. L. (2024). A majority of Americans have no or low awareness of paxlovid, the at-home COVID-19 treatment: Article examines awareness of Paxlovid, the at-home COVID-19 treatment. *Health Affairs*, 43(10), 1428–1437. <https://doi.org/10.1377/hlthaff.2023.01641>

42. Suryaprasad, A., Redd, J. T., Ricks, P. M., Podewils, L. J., Brett, M., Oski, J., Minenna, W., Armao, F., Vize, B. J., & Cheek, J. E. (2014). Effect of Rapid Influenza Diagnostic Testing on Antiviral Treatment Decisions for Patients with Influenza-like Illness: Southwestern U.S., May–December 2009. *Public Health Reports*, 129(4), 322–327. <https://doi.org/10.1177/003335491412900406>
43. Theocharis, G., Vouloumanou, E. K., Rafailidis, P. I., Spiropoulos, T., Barbas, S. G., & Falagas, M. E. (2010). Evaluation of a direct test for seasonal influenza in outpatients. *European Journal of Internal Medicine*, 21(5), 434–438. <https://doi.org/10.1016/j.ejim.2010.06.013>
44. Upjohn, L. M., Stewardson, A. J., & Marshall, C. (2012). Oseltamivir adherence and tolerability in health care workers treated prophylactically after occupational influenza exposure. *American Journal of Infection Control*, 40(10), 1020–1022. <https://doi.org/10.1016/j.ajic.2011.11.014>
45. Van Velzen, E., Hutchinson, S., Penrice, G., Ahmed, S., & Mcmenamin, J. (2011). Compliance to oseltamivir and subsequent occurrence of self-reported adverse drug reactions among nursery and primary school children following exposure to Influenza A(H1N1)v. *Scottish Medical Journal*, 56(2), 1–3. <https://doi.org/10.1258/smj.2010.010017>
46. Wang, R., Calderwood, M. S., Worby, C. P., Mercado, J. R., & Kim, J. J. (2023). National survey study of nirmatrelvir-ritonavir prescribing processes and access barriers during the severe acute respiratory coronavirus virus 2 (SARS-CoV-2) omicron surge of the coronavirus disease 2019 (COVID-19) pandemic. *Infection Control & Hospital Epidemiology*, 44(11), 1881–1883. <https://doi.org/10.1017/ice.2023.71>
47. Williams, L. O., Kupka, N. J., Schmaltz, S. P., Barrett, S., Uyeki, T. M., & Jernigan, D. B. (2014). Rapid influenza diagnostic test use and antiviral prescriptions in outpatient settings pre- and post-2009 H1N1 pandemic. *Journal of Clinical Virology*, 60(1), 27–33. <https://doi.org/10.1016/j.jcv.2014.01.016>

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?
Ahankari, 2019	Yes	Yes	Yes	Yes	No	No	No
Almahasis, 2026	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dahri, 2025	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gauld, 2011	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell
Kunin, 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lynch, 2012	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mersereau, 2012	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sansom, 2025	Mixed methods		Yes	Yes	Yes	Yes	Yes
Shaw, 2016	Yes	Yes	yes	yes	yes	yes	yes
Randomised controlled trial							
Author (year)	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	2.1. Is randomization appropriately performed?	2.2. Are the groups comparable at baseline?	2.3. Are there complete outcome data?	2.4. Are outcome assessors blinded to the intervention provided?	2.5 Did the participants adhere to the assigned intervention?
Bonner, 2003	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes

[illegible]

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?
Barthe, 2011	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Basset, 2025	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Biggerstaff, 2014	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Dharan, 2010	Yes	Can't tell	Yes	Can't tell	Yes	Can't tell	Yes
Dolan, 2012	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Gaglia, 2007	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Helfenberger, 2010	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Lonsdale, 2011	Yes	Yes	Yes	Can't tell	Yes	No	Can't tell
Masuet-Aumatell, 2013	Yes	No	Yes	Can't tell	Yes	Yes	Yes
Moller, 2023	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Murtough, 2015	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Okada, 2021	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Quinn, 2009	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quinn, 2015	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Rothberg, 2006	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Sanim, 2022	Yes	Yes	No	Can't tell	Yes	Can't tell	Yes
Sansom, 2025	Mixed methods		Yes	Can't tell	Yes	Can't tell	Yes
Soh, 2024	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SteelFisher, 2018	Yes	Yes	Yes	Yes	Yes	Yes	Yes

SteelFisher, 2024	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
UpJohn, 2012	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell
Van Velzen, 2011	Yes	Yes	Yes	Can't tell	Yes	Yes	Can't tell
Wang, 2023	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes
Williams, 2014	Yes	Yes	Yes	Can't tell	Yes	No	Yes
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?
Sansom, 2025	Yes	Yes	Yes	No	Can't tell	Can't tell	Yes

Table S6*Themes associated with each TDF domains*

Theme	Sub-theme	Description	Quotes
Knowledge			
Testing (P) - Facilitator	General (P) - Facilitator	<p>The number of influenza-positive patients who received prescriptions for antiviral drugs was significantly higher among those whose physician was aware of the result. (Bonner, 2003)</p> <p>The visiting physicians prescribed significantly more anti-influenza agents, and significantly fewer antibiotic agents to the patients that had a positive test result for influenza A or B, compared to patients that had a negative test result. (Theocharis, 2010)</p> <p>We asked physicians which factors they considered when deciding to treat patients with influenza with antiviral medications. Among 369 respondents, the following factors were reported: laboratory confirmation by a diagnostic test. (80%) (Dharan, 2010)</p> <p>Clinicians prescribed antivirals to 79% (412/521) of patients for whom they ordered an influenza test and 33% (144/437) of patients for whom they did not order an influenza test ($p < 0.0001$). (Linder, 2009)</p> <p>Physicians were more likely to prescribe antivirals to patients who had an influenza test performed (67%) than patients who did not have an influenza test (28%; $P = 0.01$) (Linder, 2006)</p> <p>Statistically significant multivariable associations of a new IILI problem/diagnosis being prescribed an NAI include ordering pathology (OR 2.76 (95% CI 1.86 to 4.09), $p < 0.001$). (Moller, 2023)</p>	NA

	<p>Rapid testing (P) - Facilitator</p>	<p>The majority of respondents (92% in 2008, 80% in 2010) reported that RIDTs assisted with diagnosing influenza. Seventy-four percent of 2010 respondents reported that RIDT results aided their decisions about initiating antiviral therapy. (Question was not asked in 2008.) Providers frequently relied on positive RIDT results to guide antiviral prescribing: More than two-thirds reported prescribing antivirals within 48h with a positive RIDT (69% pre-pandemic; 67% post-pandemic). (Williams, 2014)</p> <p>Nearly 80% of clinicians indicated they intended to give antivirals before ordering the influenza RT-PCR test, after influenza RT-PCR result was available, clinicians changed their original plans in 69% of cases, 52.4% changing their mind about antiviral use. Antiviral prescription changes were observed in 26% of influenza RT-PCR–positive cases compared with 77% of influenza RT-PCR–negative cases ($P < .0001$). (El Feghaly, 2021)</p> <p>During the entire period, after adjusting for conditions conferring elevated risk for adverse outcomes, an RIDT result had a stronger association with receipt of early AVs (rate ratio [RR] 5.3, 95% confidence interval [CI] 2.4, 4.6) than did the presence of these risk factors (RR: 51.9, 95% CI: 1.3- 2.7). These differences were more striking in the spring wave (RR: 57.4, 95% CI: 2.9- 18.9 vs. RR: 52.5, 95% CI: 0.9-6.7) than in the fall wave (RR: 52.5, 95% CI: 1.8-3.5 vs. RR: 51.8, 95% CI: 1.2-2.5). (Suryaprasad, 2014)</p> <p>In a multivariate analysis, the use of rapid testing was associated with prescribing antivirals (OR, 1.8; 95% CI, 1.1–3.0). (Rothberg, 2006)</p> <p>Reliance on RIDT results for antiviral prescription RIDT result had the largest influence on antiviral prescription (OR, 26.8; 95% CI, 13.5-53.5; $P < 0.001$). (Nakajima, 2021)</p> <p>Patients were more likely to receive antiviral prescriptions if they had rapid influenza tests ordered (aOR (95%CI): 5.9 (3.6-9.7)), had high-risk medical conditions. The odds of</p>	NA
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		<p>receiving an antiviral prescription during the ED visits were about four-fold higher for patients with than without culture/PCR-confirmed influenza (adjusted odds ratios (95%CI): 4.2 (2.6-6.9)). (Peters, 2013)</p> <p>RIDT result strongly influenced antiviral prescribing: 90.4% of RIDT-positive patients received antivirals vs 0.3% of RIDT-negative patients. Positive RIDT result increased likelihood of antiviral prescription (aOR (95%CI): 3.519 (341-36.286), $p<0.001$). (Park, 2019)</p> <p>The doctors who used the test systematically, prescribed oseltamivir treatment significantly more frequently ($p<0.01$), in comparison to the doctors who used the test occasionally, as well as to the doctors that did not use the test at all. (Theocharis, 2010)</p>	
	Influenza surveillance data (P) - Facilitator	<p>We asked physicians which factors they considered when deciding to treat patients with influenza with antiviral medications. Among 369 respondents, the following factors were reported: local influenza surveillance data (56%), whether it was “flu season” (40%), and national influenza surveillance data (21%). (Dharan, 2010)</p>	NA
Influenza knowledge (P) - Mixed		<p>Participants reported that oseltamivir was generally supplied only when specifically requested and not recommended to everyone who might have benefited. Some pharmacists reported favouring symptomatic treatment over oseltamivir because of their perception that consumers confused the symptoms of a common cold with influenza and erroneously self-diagnose ‘the flu’. (Shaw, 2016)</p> <p>Greater perception of knowledge around influenza prevention was related to a greater intention to comply with antiviral drugs as a preventative measure (Masuet-Aumatell, 2013)</p>	<p>"We don't see a lot of true influenza. Mostly they say they've got the flu but they've got bad head colds. " (Female locum pharmacist, city suburb (14)) (Shaw, 2016)</p> <p>"Positive perception of knowledge about Influenza prevention (antiviral drugs)" (Masuet-Aumatell, 2013)</p>
Guidelines (P) - Mixed	Clear and consistent (P) - Facilitator	<p>Access to decision-making support tools such as the FDA Paxlovid Eligibility Screening Checklist was vital. Pharmacists learned about these resources through the state health department, local pharmacy society, and community</p>	<p>"Getting guidance from I guess everywhere at all levels...I get a lot of emails from DHS [Wisconsin Department of Health Services]...from PSW [Pharmacy Society in Wisconsin]... CDC, FDA, all these emails, all kind of said more or less the</p>

		<p>pharmacy networks, aiding informed decisions regarding patient eligibility. (Almahasis, 2025)</p> <p>Developing and sharing new clinical tools, guidelines, and standardized documentation tools were viewed as beneficial. Having sufficient information technology support was considered a key reason for the virtual clinic's success. Clearly defined patient eligibility criteria and the participation of nurse pre-screeners were believed to optimize appropriate patient access to nirmatrelvir/ritonavir and improve PAC efficiency. (Sansom, 2025)</p> <p>The other rationales to continue therapy with remdesivir, local hospital policy alone (4, 2.2%) or as one of the contributing factors (29, 15.7%) (Samim, 2022)</p> <p>The other rationales to continue therapy with remdesivir, were guidelines alone (15, 8.1%) or as one of the contributing factors (73, 39.5%) (Samim, 2022)</p> <p>Most providers found the guidelines for treatment clear, but some expressed concern about immediately prescribing oseltamivir for pregnant women with mild symptoms. In general, providers agreed that they relied on clinical judgment in addition to CDC's guidelines. (Mersereau, 2012)</p>	<p>same information...so they all provided the framework, the guidelines and so I never felt that I had to make this up out of nothing. I was able to refer back to reference materials for that." (Almahasis, 2025)</p> <p>Why do you want to continue using remdesivir in COVID-19, when evidences are not supporting its use? (Multiple options can be opted)</p> <ul style="list-style-type: none"> • Guidelines of the state/central institute of excellence • Personal experience of benefit • Expert's recommendation • Patient's demand • Hospital's recommendation • Will not continue to use • Pre-clinical studies showed benefits • No other available options as antiviral other than remdesivir • Personal literature review • Others <p>(Samim, 2022)</p> <p>Why do you want to continue using remdesivir in COVID-19, when evidences are not supporting its use? (Multiple options can be opted)</p> <ul style="list-style-type: none"> • Guidelines of the state/central institute of excellence • Personal experience of benefit • Expert's recommendation • Patient's demand • Hospital's recommendation • Will not continue to use • Pre-clinical studies showed benefits • No other available options as antiviral other than remdesivir • Personal literature review • Others <p>(Samim, 2022)</p>
	Lack of specificity for some populations (P) - Barrier	CDC issued guidelines for prophylaxis and treatment of pH1N1 infections, updating them as needed. Most providers were aware of the guidelines, but participants admitted to	NA

		little or no experience prescribing antiviral prophylaxis for a pregnant woman after influenza exposure. (Mersereau, 2012)	
	Over recommendation (P) - Barrier	Adherence to national or institutional guidelines (n=9) (Bassett, 2025)	<p>“I would love stronger recommendations from the AAP or IDSA that specifically recommend AGAINST treatment for those low risk populations.” (Bassett, 2025)</p> <p>“I think that some of the recommendations are hard to apply in clinical practice (i.e. under 5, but especially under 2...)” (Bassett, 2025)</p> <p>“I really want to avoid it based on current data. But given current recommendations I tend to have a collaborative discussion with families.” (Bassett, 2025)</p>
Information availability (P and U) - Mixed	Provision of antiviral information (P and U) - Facilitator	<p>We asked physicians which factors they considered when deciding to treat patients with influenza with antiviral medications. Among 369 respondents, the following factors were reported: efficacy data from published studies (43%) (Dharan, 2010)</p> <p>The other rationales to continue therapy with remdesivir was personal review of the literature (6, 3.2%). (Samim, 2022)</p> <p>Physicians who prescribed antivirals had more frequently received recent information on influenza and antivirals. (Gaillat, 2005)</p> <p>Increased antiviral prescription rates after viewing the educational film, particularly among the patients at higher risk for disease progression. Thus, the film appeared to exert a positive influence on appropriate antiviral use. (Komiya, 2025)</p> <p>Whereas 57.2% indicated they would accept a drug or vaccine under the EUA if a fact sheet accompanied it, acceptance was below 15% if a fact sheet did not accompany the drug/vaccine. (Quinn, 2009)</p>	<p>Why do you want to continue using remdesivir in COVID-19, when evidences are not supporting its use? (Multiple options can be opted)</p> <ul style="list-style-type: none"> • Guidelines of the state/central institute of excellence • Personal experience of benefit • Expert’s recommendation • Patient’s demand • Hospital’s recommendation • Will not continue to use • Pre-clinical studies showed benefits • No other available options as antiviral other than remdesivir • Personal literature review • Others <p>(Samim, 2022)</p>

	<p>Lack of antiviral information (P and U) - Barrier</p>	<p>Participants described the impact of when the public received information about nirmatrelvir/ritonavir availability at the same time, or even before, they did. Participants reported that they found out about the launch of nirmatrelvir/ ritonavir through news media (Dahri, 2025)</p> <p>Fifteen of 37 (40.5%) disagreed that they had been given sufficient information about oseltamivir. (Upjohn, 2012)</p> <p>A majority of respondents (85 percent) indicated no or low awareness of Paxlovid, including 31 percent who had ‘never heard [of] Paxlovid,’ 18 percent who had only ‘heard the name Paxlovid, but [were] not sure what it was specifically,’ and 36 percent who had ‘heard a little about Paxlovid. Differences in awareness by vaccination status were notable [user]. (SteelFisher, 2024)</p> <p>A majority (61 percent) were unaware that Paxlovid should be taken within five days of developing symptoms. About three-quarters (72 percent) were unaware that Paxlovid is recommended for both moderate and mild symptoms. (SteelFisher, 2024)</p> <p>Need for more information about effectiveness and side effects influenced acceptance. The impact of information about the effectiveness of peramivir was stronger among minorities than among whites. Whites who felt they needed more information about peramivir were less willing to take the drug under all conditions except when they had no alternative. Hispanics who felt they needed more information were less willing to take the drug, even if hospitalized. Participants who felt they needed more information about peramivir were less likely to take the drug. Under the condition of no alternative, needing more information about the drug’s effectiveness and worry about the term experimental did not negatively affect willingness. (Quinn, 2015)</p> <p>Participants also tended to confuse antiviral medicines with antibiotics and to some extent, with vaccines. Some</p>	<p>“It’s a little discouraging, because you seem kind of silly when you don’t know what they’re talking about.” (Dahri, 2025)</p> <p>Awareness (asked of total sample) How much have you heard about Paxlovid? - I have never heard the name Paxlovid before today - I have heard the name Paxlovid, but I was not sure what it was specifically before today - I have heard a little about Paxlovid - I have heard a lot about Paxlovid - Don’t know (SteelFisher, 2024)</p> <p>TIMING As far as you know, when should a person start taking Paxlovid for it to be effective? - Within 5 days of developing COVID-19 symptoms - At least 2 days after developing COVID-19 symptoms - It doesn’t matter when a person starts taking Paxlovid - Don’t know (SteelFisher, 2024)</p>
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		participants recalled being prescribed a “Z-pack” when previously sick with influenza. (Lynch, 2012)	
	Limited pregnancy safety data (P) - Barrier	<p>Respondents identified the following barriers for pregnant women when trying to obtain antiviral medications such as oseltamivir: insufficient safety data (32%) (Dolan, 2012)</p> <p>Providers were more familiar with oseltamivir than zanamivir, but limited safety data for both antiviral medications in pregnant women resulted in hesitancy to prescribe them. (Mersereau, 2012)</p>	<p>In your opinion, which of the following are significant barriers to treatment of pregnant women treat influenza, such as oseltamivir, in your pharmacy? (Please select all that apply.)</p> <ul style="list-style-type: none"> - My pharmacy’s corporate policy / protocol does not allow it - Cost/Co-pay is too high with antiviral medications to - Doctors are not prescribing influenza antiviral medications for their pregnant patients - Liability - Insufficient safety data Influenza antiviral medications are not available in general - Pregnant women are not interested in taking influenza antiviral medications - Cannot get supply of antiviral medication - None of the above - Other (specify) _____ <p>(Dolan, 2012)</p>
	Restricted access to patient health information (P) - Barrier	Limited access to patient health data was a significant barrier. Pharmacists often had to repeatedly call physicians’ offices, and face pushback from nurses who were unaware of the Paxlovid prescribing process. The extra steps to pharmacists’ workflows competed with other duties, slowed the screening process, and even led to missed prescribing opportunities. Pharmacists with EHR access experienced a smoother prescribing process. The availability of patient health data through the EHR expedited screenings, enabling pharmacists to function more efficiently and provide more prescriptions. (Almahasis, 2025)	"That absence of clinical information or the requirement to obtain clinical information, put a barrier up for pharmacists to flat out just prescribe it." (Almahasis, 2025)
Prior awareness of antiviral medications (P and U)	Physician prior awareness of antiviral medications (P) - Mixed	All participants were aware of oseltamivir non-prescription avail ability, although two had been unaware early in the season. All participants had seen at least part of the educational pack. [...] Seven pharmacists used other sources of education; Pharmacists who supplied oseltamivir recalled presenting symptoms, particularly fever, lethargy, sudden onset and some times cough. Several mentioned previous contact with an influenza sufferer. (Gauld, 2021)	<p>"I don’t believe in it... I’ve got an impression that it (Tamiflu) was advised to pacify the public: get Tamiflu and everything will be all right. Because it is hard to say that there is a disease that has no treatment..." (I8) (Kunin, 2015)</p> <p>"I’ve never prescribed Tamiflu until the swine flu season... it was a bit nerve wracking, because you’re prescribing a drug you don’t really know much about, new territory, you don’t know</p>

		<p>Many GPs from each of the three countries reported that they did not use antiviral drugs to treat flu patients prior to the 2009/A/H1N1 pandemic and were generally unfamiliar with these drugs (Tamiflu and Relenza). This contributed to their confusion regarding the treatment and concerns with its safety and necessity (Kunin, 2015)</p> <p>Pharmacists reported that support staff members were often not aware that oseltamivir was an option or of its potential benefits, so may not have referred eligible consumers to the pharmacist. Pharmacists were also ambivalent about the ability of support staff to recognise influenza as their focus was principally on symptomatic relief for coughs and colds. (Shaw, 2016)</p>	<p>the risks, you don't know the pros, and it was a bit unsettling." (L18) (Kunin, 2015)</p> <p>"I think if some of the younger [support] staff members . . . had someone coming in that was exhibiting flu symptoms but if they asked for just a cold and flu product I think that they would sell them a cold and flu product." (Female pharmacist manager, city centre (18)) (Shaw, 2016)</p> <p>"They [support staff] need to be taught as well as we do because they're the ones that are going to be normally referring onto a pharmacist on a sale." (Female employee pharmacist, town (17) (Shaw, 2016)</p>
	User (patient) prior awareness of antiviral medications (U) - mixed	<p>About three-quarters (72 percent) were unaware that Paxlovid is recommended for both moderate and mild symptoms. (SteelFisher, 2024)</p> <p>More than half (54%) of respondents had heard about Paxlovid before our survey. There was significant but subtle differences in acceptance towards Paxlovid by prior awareness ($p = 0.009$). Those with prior awareness had a higher proportion who were "very likely" to take Paxlovid if prescribed compared to those who had not previously heard of Paxlovid (23% vs 16%). However, when considering those who were "very likely" and "likely" to take Paxlovid as those with higher acceptance, then proportions were similar regardless of whether they were previously aware (75%) or not (74%). (Soh, 2024)</p> <p>Unfamiliarity with antiviral medicine was an important factor influencing their acceptability among the participants. Consistently throughout the groups, participants were unaware of the term "antiviral" or how an antiviral works. For example, some participants thought that antiviral medicines only relieve symptoms and do not provide any substantive, clinical benefits. (Lynch, 2012)</p>	<p>SYMPTOMS THAT WARRANT A PRESCRIPTION</p> <p>As far as you know, is Paxlovid recommended by public health agencies for people with each of the following levels of symptoms? (Choices: Yes, recommended; No, not recommended; Don't know)</p> <ol style="list-style-type: none"> Severe COVID-19 symptoms Moderate COVID-19 symptoms Mild COVID-19 symptoms No COVID-19 symptoms at all, but a positive test <p>(SteelFisher, 2024)</p> <p>Have you heard about the use of Paxlovid medication to reduce COVID-19 severity? (awareness of Paxlovid)</p> <ul style="list-style-type: none"> Yes No <p>(Soh, 2024)</p>
Skills			

Swallowing medication (U) - Barrier	Sixteen of the 21 parents of non-compliant children reported a reason for stopping the course prematurely: the child had difficulty swallowing the medication (n = 6) (van Velzen, 2011)	NA
Lack of prescribing experience in specific population (P) - Barrier	CDC issued guidelines for prophylaxis and treatment of pH1N1 infections, updating them as needed. Most providers were aware of the guidelines, but participants admitted to little or no experience prescribing antiviral prophylaxis for a pregnant woman after influenza exposure. (Mersereau, 2012)	NA
Communication (P) - Barrier	NA	"[W]hen patients were at home, especially [given that] our population was older, it was hard to judge how well did they understand over the phone. I think that was the hardest thing." (Sansom, 2025)
Social professional role and identity		
Prescribing aligned with values (P) - Facilitator	<p>Pharmacists found Paxlovid prescribing compatible with pharmacy values and workflows, describing it as a natural extension of pharmacy services. (Almahasis, 2025)</p> <p>Nearly all (n = 9/10, 90%) of the PAC pharmacists who responded to the survey felt prepared for prescribing nirmatrelvir/ritonavir, with all (100%) reporting a sense of personal fulfillment through this clinical model. (Sansom, 2025)</p>	"It didn't require us to implement new staff, new policies, or workflows or anything related to that. We utilize what we had already in place again from testing....Patients were reaching out to us as a COVID resource so, using the education in the way we had established over a few years in the testing world created us as a resource that patients would go to. So the groundwork relayed made everything a little bit easier." (Almahasis, 2025)
Medicolegal considerations (P) - Barrier	<p>Medicolegal concerns (n=2) (Bassett, 2025)</p> <p>Respondents identified the following barriers for pregnant women when trying to obtain antiviral medications such as oseltamivir: liability concerns (23%) (Dolan, 2012)</p>	<p>"I would prescribe less if the CDC guidance was more relaxed (i.e., I interpret the evidence for tamiflu as worse than the CDC does, but feel medico legally that I should prescribe it to patients I wouldn't if the guidance didn't exist)." (Bassett, 2025)</p> <p>"I have had attending physicians offer tamiflu to every patient (offer, not recommend) due to medical-legal concerns of progression of illness when an antiviral treatment was available, even if that treatment would not have drastically altered the outcome (i.e. myocarditis)." (Bassett, 2025)</p> <p>In your opinion, which of the following are significant barriers to treatment of pregnant women treat influenza, such as oseltamivir, in your pharmacy? (Please select all that apply.)</p>

		<ul style="list-style-type: none"> - My pharmacy's corporate policy / protocol does not allow it - Cost/Co-pay is too high with antiviral medications to - Doctors are not prescribing influenza antiviral medications for their pregnant patients - Liability - Insufficient safety data Influenza antiviral medications are not available in general - Pregnant women are not interested in taking influenza antiviral medications - Cannot get supply of antiviral medication - None of the above - Other (specify) _____ <p>(Dolan, 2012)</p>
Misunderstanding of each other's responsibilities (P) - Barrier	<p>When pharmacists described having difficulty with the form, it centred on prescriber behaviour. [...] prescribers could have a range of understanding of the form, [...] Others described how prescribers filled it out incompletely. This was especially true at the beginning of the nirmatrelvir/ ritonavir rollout, when issues resulted from misunderstanding among pharmacists and physicians about each other's responsibilities with the prescribing and dispensing process. (Dahri, 2025)</p> <p>HCPs in Australia and England were required to seek permission from the health authorities to prescribe the drug and in this respect they felt that the health authorities did not rely on their clinical judgment (Kunin, 2015)</p>	<p>"It seems like a lot of doctors are not aware that this form existed." (Dahri, 2025)</p> <p>"The form put a lot of responsibility on the pharmacists . . . a lot of the time, our facility doctors would just write in . . . for example, in the interactions field, 'Pharmacist to assess'." (Dahri, 2025)</p> <p>"There were rules (to prescribe the drug), but I think this is where the government's got to realise that GPs (PCPs) are not stupid. I am sure they (PCPs) are going to usually make decisions in the best interest of the population... They (government) don't have any confidence in the people that treat people all the time." (M3) (Kunin, 2015)</p>
Beliefs about capabilities		
Self efficacy (U) - Facilitator	<p>Higher perceived self-efficacy was predictive of adherence intentions. (D'Antoni, 2019)</p> <p>Nearly all (n = 9/10, 90%) of the PAC pharmacists who responded to the survey felt prepared for prescribing nirmatrelvir/ritonavir (Sansom, 2025)</p>	<p>I am confident I would be able to take regularly the antiviral inhaler once a day for the ten recommended days, if I wanted to. (D'Antoni, 2019)</p>
Self advocacy (U) - Facilitator	<p>Overall, 38% would take the initiative to request Paxlovid if not suggested by their doctor, by either asking their doctor</p>	<p>If you were infected with COVID-19, would you ask the healthcare provider whether you can be treated with Paxlovid</p>

	<p>(25%) or even seeking a second opinion from another healthcare provider (13%). (Soh, 2024)</p> <p>Prompt healthcare seeking was associated with increased receipt of antiviral medications.(Biggerstaff, 2014)</p>	<p>medication? (initiative to request Paxlovid)</p> <ul style="list-style-type: none"> • Yes, I would ask about this medication and seek a second opinion from another doctor if they did not prescribe this to me • Yes, I would ask about this medication if the doctor did not mention it but accept their recommendation on whether it is needed • No, but I would be open to consider this medication if the doctor recommends it • No, and I would not want to take this medication even if the doctor recommends it <p>(Soh, 2024)</p>
Gaining confidence through experience (P) - Facilitator	<p>Many pharmacists were initially apprehensive about supplying oseltamivir without prescription, especially pharmacists who may not have previously had influenza themselves. Confidence did improve after supplying oseltamivir once or twice and through reading educational materials (papers, consultation pads and protocol). (Shaw, 2016)</p> <p>PAC pharmacists expressed that awareness of one's own scope of knowledge and competency and utilization of professional judgment are important factors when implementing a collaborative practice agreement. Despite initial prescribing hesitancy, most pharmacists achieved confidence with prescribing through experience. (Sansom, 2025)</p>	<p>"I don't know how much I believe in it yet because I'm one to see how it goes . . .we never had customers come in and tell us afterwards what it was like." (Female employee pharmacist, rural town (11)) (Shaw, 2016)</p> <p>"I felt totally comfortable selling it. I told them that it would help to reduce the severity of the symptoms and the length . . .and that the earlier they took it the better." (Female pharmacist owner, city suburb (6) (Shaw, 2016)</p>
Beliefs about consequences		
Concerns regarding antiviral related adverse events (P and U) - Barrier	<p>Concerns regarding the adverse effects of oseltamivir (n=25) (Bassett, 2025)</p> <p>Major reasons to not be very likely to get these antivirals included concern about side effects (39%), thinking the antiviral drugs would not be safe (25%) (SteelFisher (Public), 2018)</p> <p>Most (86 percent) had misperceptions of Paxlovid's adverse effects (exhibit 3), with 37 percent incorrectly believing adverse effects such as a bad taste in the mouth, upset</p>	<p>"I very much understand the benefit for preventing complications, especially for children under two, but a lot of the children who come to the ED for flu already are having trouble tolerating PO and tamiflu usually causes severe nausea/vomiting which exacerbates this problem. I generally always prescribe Zofran with tamiflu. Our follow-up nurses receive numerous phone calls about children having a hard time tolerating tamiflu and we do get quite a few bounce back patients for nausea/vomiting side-effects related to tamiflu and I think many of those patients would have done fine without it." (Bassett, 2025)</p>

	<p>stomach, or diarrhea were “very” or “somewhat” likely and 49 percent saying that they did not know whether adverse effects were likely. Adults who were not vaccinated against COVID-19 and had heard of Paxlovid were more likely to report holding certain types of misinformation than their counterparts who were boosted against COVID-19 (SteelFisher, 2024)</p> <p>Several concerns from our respondents about taking Paxlovid: potential side effects (64%) ($p < 0.001$, between low and high acceptance of paxlovid) (Soh, 2024)</p> <p>The main reason for non-compliance was not starting the course of medication (eight patients). Reasons given for this included:</p> <ul style="list-style-type: none"> - being worried about potential side effects <p>Patients who did not complete the course of treatment after they had started gave the reasons:</p> <ul style="list-style-type: none"> - they suffered side effects (3 patients), - they were afraid of side effects <p>(Lonsdale, 2011)</p> <p>Stopping PEP due to being afraid of the adverse effects of the PEP (Okada, 2021)</p> <p>Stopping PEP due to the occurrence of adverse events (Okada, 2021)</p> <p>Respondents who indicated they had not prescribed any antiviral therapy offered several reasons for not prescribing. No one cited concern about inducing antiviral resistance.</p> <ul style="list-style-type: none"> - Too many side effects (about 15%) (Rothberg, 2006) <p>Sixteen of the 21 parents of non-compliant children reported a reason for stopping the course prematurely: the occurrence of ADRs ($n = 2$). (van Velzen, 2011)</p> <p>A few pharmacists were worried about side effects. (Shaw, 2016)</p>	<p>“I consider the side effects to be the biggest downside of oseltamivir which often limits me strongly recommending it to patients. I’d be curious about what patients and family’s attitudes were about the side effects they experienced.” (Bassett, 2025)</p> <p>“Sometimes it is not well received due to significant GI side effects (nausea/vomiting).” (Bassett, 2025)</p> <p>Please tell me whether each of the following would be a major reason, a minor reason or not a reason at all that you (would not be very likely to go /would be not at all likely to go) get these stockpiled antiviral drugs for yourself within 2 days of getting sick. (SteelFisher (Public), 2018)</p> <p>LIKELIHOOD OF ADVERSE SIDE EFFECTS</p> <p>As far as you know, how likely are most adults who take Paxlovid to experience negative side effects like a bad taste in the mouth, upset stomach, or diarrhea?</p> <ul style="list-style-type: none"> - Very likely - Somewhat likely - Not too likely - Not at all likely - Don’t know <p>(SteelFisher, 2024)</p> <p>What are some of the reasons why you are unlikely to accept a doctor’s recommendation to take Paxlovid? <select all that apply></p> <ul style="list-style-type: none"> • I think COVID-19 is a mild disease that does not need such treatment • I am worried about the side effects of Paxlovid • I am on long-term medications that may be affected if I have to take Paxlovid • I am worried about the cost of Paxlovid • I don’t believe that Paxlovid is every effective • I have heard some people on Paxlovid had rebound COVID-19 so I am not confident it works • I have existing medical condition(s) that prevents me from
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	<p>The primary factors influencing the decision to prescribe antivirals included concerns regarding drug interactions (Komiya, 2025)</p> <p>Despite this confusion, most participants said that they would be willing to take antiviral medicine if infected with the 2009 H1N1 virus while pregnant but others were more hesitant because of concerns about potential side effects on the fetus. (Lynch, 2012)</p> <p>8% of participants did not prescribe due to Concern for side effects of antivirals (Dharan, 2010)</p> <p>Concern regarding the safety of antivirals had an effect on prescribing practice, with a greater proportion of ob-gyns who were concerned or very concerned regarding safety, responding that they do not routinely prescribe antivirals (31.7% versus 16.3% and 13.5% who were slightly or not concerned, respectively; $p < 0.001$) a higher proportion who were concerned or very concerned responding that gestational age affected their decision to prescribe (11.8% versus 8.1% and 3.4% who were slightly or not concerned, respectively; $p=0.001$). Ob-gyns with more than 20 years of practice were more likely to be concerned about the risks of antivirals for healthy pregnant women (50.9% versus 39.7%; $p= 0.038$). (Murtough, 2015)</p> <p>Some women knew that antiviral medicine was contraindicated for young children and were concerned about transmission of the medication through breast milk.</p> <p>The primary factor influencing acceptance or rejection of antiviral medicines for 2009 H1N1, as it was for influenza vaccine, was concern for the fetus. Because pregnant women are routinely taught to be careful about taking medications, many participants reported being very cautious about taking medications during pregnancy, even if they are prescribed. (Lynch, 2012)</p>	<p>taking Paxlovid</p> <ul style="list-style-type: none"> • I find it troublesome to take Paxlovid medication (3 tablets, twice daily for 5 days) • I have allergies to Paxlovid medication • Others, please specify: _____ <p>(Soh, 2024)</p> <p>"We've had in the paper about those Japanese cases of depression and whatever on Tamiflu. And I admit that freaked me out a little bit." (Female employee pharmacist, rural town (11) (Shaw, 2016)</p> <p>As one woman reported, "I don't know what I would do because I don't know if I can risk taking it [antiviral medicine] and giving it to him [infant]." (Lynch, 2012)</p>
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Concerns about resistance (P and U) - Barrier	<p>Reasons for business travelers not to take their antivirals were</p> <ul style="list-style-type: none"> - I am concerned about resistances 58 (9.7%) (Helfenberger, 2010) <p>A few pharmacists were worried about resistance. (Shaw, 2016)</p>	<p>I did not take any antiviral tablets along, because... (multiple answers possible, only answered by the travelers who did not use antiviral medication on their last business trip) (Helfenberger, 2010)</p> <p>"I do think that resistance is the number one issue. It would be a real shame for the drivers of Tamiflu to become useless . . . because it has been miss-prescribed." (Female employee pharmacist, city centre (18)) (Shaw, 2016)</p>
Concerns about experimental labelling (U) - Barrier	<p>The term experimental led to less likelihood of the participants taking the drug for all groups under all conditions except for Hispanics when there were no alternatives. Hispanics who were worried about the term experimental were less likely to take the drug even if they were severely ill. Under the condition of no alternative, needing more information about the drug's effectiveness and worry about the term experimental did not negatively affect willingness. (Quinn, 2015)</p>	NR
Perception of antiviral effectiveness (P and U) - Mixed	<p>Amongst allopathic practitioners, influenza-specific antiviral medications were generally not prescribed because they were perceived to be ineffective. (Ahankari, 2019)</p> <p>When asked about why they prescribed antivirals, doctors responded that 'Acting on the duration of symptoms (N =135)' was of</p> <ul style="list-style-type: none"> - Low importance: 38% - Medium importance: 29% - High importance: 33% <p>in their decision making (Barthe, 2011)</p> <p>When asked about why they prescribed antivirals, doctors responded that 'Acting on how contagious the disease is (N =128)' was of</p> <ul style="list-style-type: none"> - Low importance: 43% - Medium importance: 35% - High importance: 22% <p>in their decision making (Barthe, 2011)</p>	<p>Antivirals do not work and are not used routinely.(Interview 7, general practitioner) (Ahankari, 2019)</p> <p>"I generally have no issue giving it based on the time frame of < 48 hours of onset, especially for asthmatics." (Bassett, 2025)</p> <p>“Early diagnosis and treatment is challenging to assessing its true benefit. A large portion of its use falls outside the window where this drug will provide clear benefit.” (Bassett, 2025)</p> <p>EFFECTIVENESS</p> <p>As far as you know, how effective is Paxlovid for most adults who take it in preventing them from getting seriously ill or having to be hospitalized with COVID-19?</p> <ul style="list-style-type: none"> - Very effective - Somewhat effective - Not too effective - Not effective at all - Don't know <p>(SteelFisher, 2024)</p>

	<p>When asked about why they prescribed antivirals, doctors responded that 'Acting on the complication risks (N =134)' was of</p> <ul style="list-style-type: none"> - Low importance: 37% - Medium importance: 26% - High importance:37% <p>in their decision making (Barthe, 2011)</p> <p>Clinical factors considered in decision making: Duration of illness (n=25) (Reviewer comments: this factor is about fear of parents not being overly cautious (Bassett, 2025)</p> <p>About four in ten (39 percent) either said that they did not know whether Paxlovid was effective for most adults who take it (33 percent) or thought that it was ineffective (6 percent) (SteelFisher, 2024)</p> <p>GPs who prescribed antivirals were more likely to perceive antivirals as:</p> <ul style="list-style-type: none"> - Being the etiological treatment of influenza - Having been scientifically proven - Being useful - Preventing antibiotic prescriptions - Preventing bacterial superinfections - Allowing a faster return to normal activity - Limiting the spread of influenza <p>(Gaillat, 2005)</p> <p>Major reasons to not be very likely to get these antivirals included thinking the antiviral drugs would not be effective (26%). (SteelFisher (Public), 2018)</p> <p>Pharmacists who considered that oseltamivir was beneficial, would definitely take it themselves and who had higher socio-economic clientele supplied most oseltamivir. Two older male pharmacy owners preferred not to supply— one due to perceptions around effectiveness and affordability for those who needed it most. The second preferred people to visit the nearby walk-in doctor clinic for diagnosis. A young female pharmacist was ambivalent on cost and effectiveness</p>	<p>Please tell me whether each of the following would be a major reason, a minor reason or not a reason at all that you (would not be very likely to go /would be not at all likely to go) get these stockpiled antiviral drugs for yourself within 2 days of getting sick. (SteelFisher (Public), 2018)</p> <p>Why did you take the antiviral medication? (multiple answers possible, only answered by the travelers who used antiviral medication on their last business trip) (Helfenberger, 2010)</p> <p>"I'm a bit ambivalent . . .what's the point of spending all that money to get perhaps a day?" (Female employee pharmacist, city centre (1)) (Shaw, 2016)</p> <p>Why do you want to continue using remdesivir in COVID-19, when evidences are not supporting its use? (Multiple options can be opted)</p> <ul style="list-style-type: none"> • Guidelines of the state/central institute of excellence • Personal experience of benefit • Expert's recommendation • Patient's demand • Hospital's recommendation • Will not continue to use • Pre-clinical studies showed benefits • No other available options as antiviral other than remdesivir • Personal literature review • Others <p>(Samim, 2022)</p> <p>What are some of the reasons why you are unlikely to accept a doctor's recommendation to take Paxlovid? <select all that apply></p> <ul style="list-style-type: none"> • I think COVID-19 is a mild disease that does not need such treatment • I am worried about the side effects of Paxlovid • I am on long-term medications that may be affected if I have to take Paxlovid • I am worried about the cost of Paxlovid
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	<p>grounds, despite previously having oseltamivir prescribed at her request. These pharmacists did not supply non-prescription oseltamivir. (Gauld, 2021)</p> <p>Reasons for business travelers to take the antivirals:</p> <ul style="list-style-type: none"> - To reduce the risk of getting influenza 16 (34.8%) - To reduce the duration of illness 37 (80.4%) <p>(Helfenberger, 2010)</p> <p>There were mixed perceptions on the efficacy of the product; while most pharmacists felt it was effective, several were unconvinced. (Shaw, 2016)</p> <p>The primary factors influencing the decision to prescribe antivirals included: perceived clinical benefit (Komiya, 2025)</p> <p>Among the respondents who preferred to continue therapy with remdesivir, 37 (20%) stated personal experience of perceived benefits as the sole rationale while 86 (46.5%) reported it to be one of the contributing factors. (Samim, 2022)</p> <p>In a multivariate analysis, the beliefs that antiviral therapy shortens illness (OR, 4.9; 95% CI, 1.8–13.2) and decreases mortality rates (OR, 3.0; 95% CI, 1.7–5.5) was associated with prescribing antivirals (Rothberg, 2006)</p> <p>If user had a positive attitude towards influenza prevention (i.e. belief that vaccination against influenza will reduce the risk of acquiring influenza while traveling), they were more likely to have the intention to adhere to antiviral drugs preventively (aOR (95%CI), 4.26 (1.54-11.73)) (Masuet-Aumatell, 2013)</p> <p>Sixteen of the 21 parents of non-compliant children reported a reason for stopping the course prematurely: parents did not see (further) benefit (n = 3) (van Velzen, 2011)</p> <p>Respondents who indicated they had not prescribed any</p>	<ul style="list-style-type: none"> • I don't believe that Paxlovid is every effective • I have heard some people on Paxlovid had rebound COVID-19 so I am not confident it works • I have existing medical condition(s) that prevents me from taking Paxlovid • I find it troublesome to take Paxlovid medication (3 tablets, twice daily for 5 days) • I have allergies to Paxlovid medication • Others, please specify: <p>(Soh, 2024)</p>
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	<p>antiviral therapy offered several reasons for not prescribing. No one cited concern about inducing antiviral resistance.</p> <ul style="list-style-type: none"> - Not very effective (about 30%) (Rothberg, 2006) <p>2% did not believe the antivirals were effective (Dharan, 2010)</p> <p>Several concerns from our respondents about taking Paxlovid: I don't believe paxlovid to be very effective ($p < 0.001$, between low and high acceptance of paxlovid) (Soh, 2024)</p> <p>Pharmacists who considered that oseltamivir was beneficial, supplied most oseltamivir</p>	
Perceived balance of antivirals risks and benefits (P and U) - Mixed	<p>Weighing the risks and benefits (n=12) (Bassett, 2025)</p> <p>One HCW disagreed that oseltamivir is effective in preventing influenza, but completed the course regardless. The remaining respondents were ambivalent or agreed that oseltamivir is effective.</p> <p>-Four of 37 HCWs (10.8%) agreed that taking oseltamivir was a “waste of time”. Of these, 3 reported AEs, and 2 did not finish the course. Nineteen of 37 (51.3%) disagreed that taking oseltamivir was a “waste of time,” 3 of whom reported AEs. (Upjohn, 2012)</p> <p>When asked whether antiviral medications such as oseltamivir can be given during pregnancy because the benefits outweigh the risks, 38% agreed, 36% were neutral, 9% disagreed, and 17% did not know. (Dolan, 2012)</p> <p>Reasons for business travelers not to take their antivirals were:</p> <ul style="list-style-type: none"> - My stay was very short 177 (29.7%) - I do not like to use too many chemicals 222 (37.2%) - I have read about severe side effects 10 (1.7%) - I have experienced severe side effects 4 (0.7%) 	<p>“My clinical impression is that the benefits of oseltamivir in outpatient management children are pretty limited.” (Bassett, 2025)</p> <p>“The benefits of reducing length of symptoms are far outweighed by the side effects and I do not routinely prescribe it.” (Bassett, 2025)</p> <p>“My general sense is on average 1/2 day shorter symptoms (e.g. 5 to 4.5) if started within 2 days of symptom onset. Thus, starting tamiflu at 4 days seems of limited benefit and TF has GI side effects thus low benefits/SE. My general sense is Tamiflu is not a huge 'game changer' for symptoms.” (Bassett, 2025)</p> <p>Antiviral medications such as oseltamivir can be given during pregnancy because their benefits outweigh their risks. (Agree, Neutral, Disagree, Don't know) (Dolan, 2012)</p> <p>I did not take any antiviral tablets along, because... (multiple answers possible, only answered by the travelers who did not use antiviral medication on their last business trip) (Helfenberger, 2010)</p>

	- There was no risk of influenza 95 (15.9%) (Helfenberger, 2010)	
Perceived seriousness of the disease (P and U) - Mixed	<p>And to perceive the flu as being a serious condition than GPs who do not prescribe antivirals (Gaillat, 2005)</p> <p>The belief that one does not need medication to recover from influenza was associated with less willingness to pay (OR, 0.34; 95% CI, 0.17–0.66) (Gaglia, 2021)</p> <p>Higher perceived susceptibility was predictive of adherence intentions. (D'Antoni, 2019)</p> <p>Major reasons to not to not be very likely to get these antivirals included waiting to see if symptoms got worse (36%). (SteelFisher, 2018)</p> <p>Those who perceived more serious consequences from COVID-19 (aOR: 1.24, 95% CI 1.09 – 1.40) were more likely to take the initiative to request Paxlovid. (Soh, 2024)</p> <p>Several concerns from our respondents about taking Paxlovid: perceptions that COVID-19 is not severe (25%) (p=0.008, between low and high acceptance of paxlovid) (Soh, 2024)</p> <p>knowledge about the potential risk of infection with influenza was independently associated with an intention to comply with influenza antiviral drugs as a therapeutic measure (aOR (95%CI), 7.02 (1.11-44.21) (Masuet-Aumatell, 2013)</p> <p>Provider perceptions of disease severity appeared to influence their decision-making about prevention and treatment. (Mersereau, 2012)</p> <p>Perceived severity and hospitalization context increased acceptance:</p> <p>Overall, the likelihood of taking peramivir increased across</p>	<p>I would feel regret if I had not taken antivirals and ended up getting the pandemic flu (D'Antoni, 2019)</p> <p>Please tell me whether each of the following would be a major reason, a minor reason or not a reason at all that you (would not be very likely to go /would be not at all likely to go) get these stockpiled antiviral drugs for yourself within 2 days of getting sick. (SteelFisher, 2018)</p> <p>What are some of the reasons why you are unlikely to accept a doctor's recommendation to take Paxlovid? <select all that apply></p> <ul style="list-style-type: none"> • I think COVID-19 is a mild disease that does not need such treatment • I am worried about the side effects of Paxlovid • I am on long-term medications that may be affected if I have to take Paxlovid • I am worried about the cost of Paxlovid • I don't believe that Paxlovid is every effective • I have heard some people on Paxlovid had rebound COVID-19 so I am not confident it works • I have existing medical condition(s) that prevents me from taking Paxlovid • I find it troublesome to take Paxlovid medication (3 tablets, twice daily for 5 days) • I have allergies to Paxlovid medication • Others, please specify: _____ <p>(Soh, 2024)</p> <p>One participant (from the higher vaccine acceptance group) said and others agreed, "I would probably be more likely to take it for swine flu cause it's a scarier thing. I'll try what I can to get it [seasonal influenza] out of my system, I guess. A [seasonal] flu, I can ride through a little bit." (Lynch, 2012)</p>

	<p>the conditions from “hospitalized” to “severely ill” (Quinn, 2015)</p> <p>Perceived personal consequences were also higher among those who said they would accept the EUA drug for themselves than among those who refused ($p=0.032$). Greater perceived personal consequences (OR 1.51; 95% CI 1.19-1.91; $p<0.001$) were associated with acceptance of the drug (Quinn, 2009)</p> <p>Respondents who indicated they had not prescribed any antiviral therapy offered several reasons for not prescribing. No one cited concern about inducing antiviral resistance. - Influenza is self-limited (about 40%) (Rothberg, 2006)</p> <p>Consistently throughout the groups, most participants said they would not take antiviral medicine for seasonal influenza primarily because they considered the seasonal influenza less dangerous than 2009 H1N1. (Lynch, 2012)</p>	
Goals		
Carrying antiviral preventively (U) - Facilitator	When patients were motivated (i.e. would consider carrying oseltamivir or zanamivir while travelling), they were more likely to have the intention to adhere to antiviral drugs preventively Adjusted Odds Ratio = 4.66 (1.52-14.30) (Masuet-Aumatell, 2013)	NA
Memory, attention and decision making		
Decision-making processes (P) - Facilitator	<p>Clinical decision-making combined intuitive and analytical reasoning. Practitioners continually reassessed patients and updated diagnoses according to symptom evolution. (Ahankari, 2019)</p> <p>Providers agreed that they relied on clinical judgment in addition to CDC’s guidelines. (Mersereau, 2012)</p>	"For the first 3 days, only symptomatic treatment is given... If the patient feels no relief after 3 days, we investigate further." (Ahankari, 2019)
Salient memory (P) - Facilitator	Temporal proximity to previous health threat influencing prescription (salient event) (Gauld, 2021)	NA

Forgetting to take medication (U) - Barrier	Forgetting to take the PEP (Okada, 2021)	NA
Self-guided decision (U) - Barrier	<p>Stopping PEP due to misguided self-decision (Okada, 2021)</p> <p>Patients who did not complete the course of treatment after they had started gave the reasons:</p> <ul style="list-style-type: none"> - that symptoms had gone or were better - they thought they did not have swine influenza. <p>(Lonsdale, 2011)</p>	NA
Environmental context and resources		
Multidisciplinary collaboration (P) - Facilitator	<p>Three participants described how a specific “COVID team” (BC COVID Assessment and Therapeutics e-team [CATE]) of pharmacists and physicians facilitated their ability to dispense nirmatrelvir/ritonavir in a timely manner (Dahri, 2025)</p> <p>Strong partnerships with external organizations like the Community Pharmacy Enhanced Services Network were beneficial, providing early awareness of and access to COVID-19 vaccines and therapeutics and resources for implementing Paxlovid prescribing. (Almahasis, 2025)</p> <p>Other facilitators included strong and consistent team communication/collaboration, regular virtual team huddles, collaboration between the health authorities involved, and having easy access to PAC physician collaborators. (Sansom, 2025)</p> <p>When pharmacists described having difficulty with the form, it centred on prescriber behaviour. [...] prescribers could have a range of understanding of the form; [...] Others described how prescribers filled it out incompletely. This was especially true at the beginning of the nirmatrelvir/ ritonavir rollout, when issues resulted from misunderstanding among pharmacists and physicians about each other’s responsibilities with the prescribing and dispensing process. (Dahri, 2025)</p>	<p>“One of my patients . . . said they were coughing, and then we went over to their house, we tested them for COVID 19 outside the door . . . and they were positive. . . . We obtained a prescription from CATE in maybe an hour after. And then we filled it, got it, dropped off again, and then that was it! . . . That was really fast; I really enjoyed that interaction with them.” (Dahri, 2025)</p> <p>"We are a member of the Community Pharmacy Enhanced Services Network (CPESN) and CPESN was a Federal partner for the COVID vaccine. So we were able to access that early on, and additionally, they were our federal partner for therapeutics. So the partnership we have I guess, the resources and support we have as a CPESN member, also enable us to implement these kinds of services" (Almahasis, 2025)</p> <p>"I really liked the team-based approach that although we were doing ... consults on our own, we could still run it by ... other pharmacists who are doing the same thing who might have had ... different experiences or [run] into that situation before. So, I really enjoyed bouncing ideas off other people, that was great." (Sansom, 2025)</p> <p>“The form put a lot of responsibility on the pharmacists . . . a lot of the time, our facility doctors would just write in . . . for example, in the interactions field, ‘Pharmacist to assess’.” (Dahri, 2025) “It seems like a lot of doctors are not aware that this form existed.” (Dahri, 2025)</p>

<p>Virtual consultations (P) - Facilitator</p>	<p>Another pharmacist did a home visit then persuaded the sufferer to visit the pharmacy to enable legal supply.(Gauld, 2021)</p> <p>For Black patients, 53% of the variation in prescription rates (vs white patients) was explained by encounter-level characteristics, with 5% explained by differences in virtual care use. For Latino patients, 39% of variation in prescription rates (vs white patients) was explained by encounter-level characteristics, with 8% explained by virtual care use.</p> <p>Visit Type/Virtual Care Use: Office Visit, Telephone or Video Visit, e-Message or Other (Bromley-Dulfano, 2025)</p> <p>For Black patients, 53% of the variation in prescription rates (vs white patients) was explained by encounter-level characteristics, with 27% explained by the site of care. For Latino patients, 39% of variation in prescription rates (vs white patients) was explained by encounter-level characteristics, with 8% explained by site of care</p> <p>Practice/Site of Care: Clinic fixed effects (Bromley-Dulfano, 2025)</p> <p>For Black patients, 53% of the variation in prescription rates (vs white patients) was explained by encounter-level characteristics, with 21% explained by COVID-19 test type used. For Latino patients, 39% of variation in prescription rates (vs white patients) was explained by encounter-level characteristics, with 23% explained by test type</p> <p>COVID-19 Diagnostic Test Type: In-Clinic PCR, In-Clinic Antigen, Home Antigen Test (Bromley-Dulfano, 2025)</p> <p>On bivariate analysis, at the time of initial drug availability, centralized prescribing reduced initial provider discomfort as a perceived access barrier (33% centralized vs 71%</p>	<p>"In relation to disagreement with rules regarding the need for the suffering client to get the prescription themselves rather than send a third party: "I cannot see why it cannot be done on the telephone. [...]. So the very last thing you want to do is... get out of bed and get down to the local pharmacy and cough and splutter over the pharmacist to prove that you've actually got the flu" (Gauld, 2021)</p> <p>The following are commonly described barriers for access to Paxlovid. Please rank these from 1-5 in terms of how they affected to your institution during the weeks immediately after its release, with 1 being the most significant and 5 being the least significant.</p> <ul style="list-style-type: none"> ___ Drug supply ___ Window of time for authorized use after symptom onset ___ Patient interest ___ Provider discomfort with prescribing ___ Consent and documentation process (Wang, 2023)
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	decentralized; $P=.05$). By the time of survey distribution, there were no differences in provider discomfort based on prescribing mechanism (50% vs 53%; $P=.88$). (Wang, 2023)	
Clinical space organisation (P) - Facilitator	<p>Physical space within pharmacies played an important role by allowing for safe management of interactions with patients. Key strategies included using signage to guide symptomatic patients to a designated area (e.g., a curbside site), and existing screening areas and private rooms allowed for effective management of in-person visits. (Almahasis, 2025)</p> <p>Having modified the organization of the practice were significantly associated with more prescriptions reported $p = 0.004$, respectively). (Barthe, 2011)</p>	"We already had screens and everything put up. So for the couple of people who did come in and came to the full-screened area we just were, Can you go sit down over there, we'll be with you shortly, and we kind of kept them in that screening area." (Almahasis, 2025)
Lack of compensation for work (P) - Barrier	Barriers related to reimbursement and Paxlovid supply were identified. Although pharmacists received compensation for prescribing and dispensing Paxlovid prescriptions, they were not compensated for the effort and time invested in clinical assessments, which could involve making multiple calls to the patient's physician's office to obtain the necessary information. Pharmacists described this compensation as "unfair," "not very good," and "ridiculous." (Almahasis, 2025)	"The reimbursement that we get back from third-party pairs is not equivalent to some of the work that goes in again creating the access, going through the screenings, and doing that type of stuff. So obviously this is a barrier." (Almahasis, 2025)
Impractical administrative tasks (P) - Barrier	<p>In Australia and England, early involvement of PCPs in the pandemic management implied that they were the main source of surveillance for the health authorities, and they were required to report every suspected case. The reporting was mandatory for arranging the virological test and prescription of antivirals. This reporting was described by PCPs from these two countries as being time-consuming and hard to perform in primary care (Kunin, 2015)</p> <p>The rapid timeline for PAC setup and implementation led to a patchwork information technology infrastructure, meaning that multiple systems were required to complete each referral (Sansom, 2025)</p>	"...you had to wait 45 min on the phone to get an approval number ... and without that approval you couldn't initiate the treatment." (M2) (Kunin, 2015)

Ineffective communication lines (P) - Barrier	<p>When there were questions or issues with drug interactions that prescribers missed when they filled out the form, pharmacists often described the back and forth with prescribers as being a major source of frustration, especially as often there was no direct phone line and they were relying on communicating via faxes. (Dahri, 2025)</p> <p>For those positive patients who were not prescribed oseltamivir (12), the pharmacy team was unable to contact the physician in a timely manner in 42% of cases. (Papastergiou, 2016)</p>	<p>"In long-term care we're so lucky that our doctors are so available and will take your calls every time." (Dahri, 2025)</p>
Affordability (P and U) - Barrier	<p>9% of participants reported not treating patients with influenza with antivirals because the patient could not afford the medication (Dharan, 2010)</p> <p>Respondents identified the following barriers for pregnant women when trying to obtain antiviral medications such as oseltamivir: financial concerns such as the cost or copay being too high (28%) (Dolan, 2012)</p> <p>A minority of INA+ patients who returned their self-questionnaire (12%, n = 24) did not purchase the prescribed medication, mainly for economic reasons (non-reimbursed product: 50%; too expensive: 46%). (Gaillat, 2005)</p> <p>The reasons given by physicians for not prescribing an antiviral were as follows: non-reimbursed product (47%), too expensive (34%). (Gaillat, 2005)</p> <p>Major reasons to not to not be very likely to get these antivirals included think the cost of the antiviral drugs would not be affordable (33%). (SteelFisher, 2018)</p> <p>Several concerns from our respondents about taking Paxlovid: the cost of Paxlovid (29%) ($p < 0.001$, between low and high acceptance of paxlovid) (Soh, 2024)</p> <p>Some considered oseltamivir too expensive or reported that</p>	<p>In your opinion, which of the following are significant barriers to treatment of pregnant women treat influenza, such as oseltamivir, in your pharmacy? (Please select all that apply.) - Cost/Co-pay is too high with antiviral medications to (Dolan, 2012)</p> <p>Please tell me whether each of the following would be a major reason, a minor reason or not a reason at all that you (would not be very likely to go /would be not at all likely to go) get these stockpiled antiviral drugs for yourself within 2 days of getting sick. (SteelFishe, 2018)</p> <p>5. What are some of the reasons why you are unlikely to accept a doctor's recommendation to take Paxlovid? <select all that apply> • I am worried about the cost of Paxlovid (Soh, 2024)</p> <p>"A couple of people that I discussed it with had basically said I just can't afford that." (Female pharmacist owner, city suburb. (10)) (Shaw, 2016)</p> <p>" You have to decide what the risk you're willing to take of not taking it is and can you afford to have that many days off at the moment. So I guess in any case it would be a good idea to take it if you could afford to at the time or if your situation suited." (Female pharmacist manager, rural town (9) (Shaw, 2016)</p>

	<p>consumers chose not to purchase it, even when advised of the benefits. Pharmacists were more likely to promote oseltamivir to consumers whom they perceived to be from middle to high socio-economic groups in employment associated with significant commitments (e.g. executives). (Shaw, 2016)</p> <p>Providers noted that cost for and access to these medications were barriers to both prophylaxis and treatment. (Mersereau, 2012)</p> <p>Non-supply resulted from lack of recommendation by pharmacists, pharmacists' perceptions of affordability for some consumers. (Gauld, 2021)</p> <p>Pharmacists who had higher socio-economic clientele supplied most oseltamivir. Two older male pharmacy owners preferred not to supply— one due to affordability for those who needed it most. A young female pharmacist was ambivalent on cost and effectiveness grounds, despite previously having oseltamivir prescribed at her request (Gauld, 2021)</p> <p>When asked how much they were willing to pay for antiviral medication that would shorten the duration of influenza-like symptoms by 1 day, 205 (84%) of the respondents were willing to pay something, but only 90 (37%) were willing to pay >\$20. (Gaglia, 2021)</p>	
Transportation (U) - Barrier	<p>Patients reported not wanting to pursue non-oral therapies due to multiple barriers including difficulty-acquiring transportation to the infusion clinic and burden of requiring more than one infusion. (Hart, 2024)</p>	
Drug supply and availability (P) - Mixed	<p>Drug supply was a major initial barrier but declined over time (52% to 0%; $P<.001$). (Wang, 2023)</p> <p>Respondents who reported difficulty obtaining antiviral agents reported that the medications were not available from outpatient pharmacies (36%), inpatient pharmacies (21%), or</p>	<p>The following are commonly described barriers for access to Paxlovid. Please rank these from 1-5 in terms of how they affected to your institution during the weeks immediately after its release, with 1 being the most significant and 5 being the least significant.</p> <p>___ Drug supply</p>

	from both in-patient and out-patient pharmacies (33%) (Dharan, 2010)	___ Window of time for authorized use after symptom onset ___ Patient interest ___ Provider discomfort with prescribing ___ Consent and documentation process (Wang, 2023)
Resource allocation (P) - Mixed	<p>Limited diagnostic facilities and resource constraints strongly influenced treatment and referral decisions. (Ahankari, 2019)</p> <p>Adequate staffing and effective use of support staff (i.e., technicians) were crucial for managing Paxlovid prescribing. Well-trained technicians and multiple pharmacists streamlined workflows and fostered efficient handling of prescriptions. (Almahasis, 2025)</p> <p>Initial staffing requirements were difficult to predict without knowing PAC referral numbers. Thus, the PAC pharmacists found the initial workload challenging when referral volume exceeded staff capacity, especially for pharmacists who took on PAC referrals in addition to their regular duties. The 5-day window to start nirmatrelvir/ritonavir required a quick turnaround on referrals, which further contributed to workload challenges (Sansom, 2025)</p> <p>Overwhelming amount of information to learn with little available time and/or support; Participants felt they were left on their own to decipher how to dispense nirmatrelvir/ritonavir with little time and support to do so. (Dahri, 2025)</p> <p>Most participants described the preprinted prescription form (BC Paxlovid Prescription Form) as helpful for dispensing nirmatrelvir/ritonavir as it served to support them in confirming the patient's eligibility for receiving nirmatrelvir/ritonavir. Overall, participants described how drug interaction checkers facilitated their ability to dispense nirmatrelvir/ritonavir. They reported using a combination of drug interaction checkers (e.g., Liverpool, LexiComp, Kroll) frequently and experienced them as "straightforward" (Dahri, 2025)</p>	<p>"We have very limited tools here and no tests are available at our clinic." (Ahankari, 2019)</p> <p>"I've been fortunate typically to have 2 pharmacists covering the hours that we're open meaning that one pharmacist is typically in charge of the bench work vs. the other is available for appointments and floating into these sorts of situations that take a little bit more time and counsel..." PHARM #4 (Almahasis, 2025)</p> <p>"Weren't very prepared but there were a lot of resources. I think part of pharmacy practice is learning on the job. So, I think the BC Pharmacy Association [BCPhA] had a lot of resources. The government had a lot of resources, like the Pharmcare website. I think it gave you step-by-step guides. It gave you examples to sort where you should look for interactions, what you should do, what it looks like. And then I think, once you did it once or twice, it wasn't so bad after all." (Dahri, 2025)</p> <p>"It didn't require us to implement new staff, new policies, or workflows or anything related to that. We utilize what we had already in place again from testing....Patients were reaching out to us as a COVID resource so, using the education in the way we had established over a few years in the testing world created us as a resource that patients would go to. So the groundwork relayed made everything a little bit easier." (Almahasis, 2025)</p>

Social influences		
Expert recommendation (P) - Facilitator	<p>The other rationales to continue therapy with remdesivir, expert recommendations alone (5, 2.7%) or as one of the contributing factors (39, 21.1%). (Samim, 2022)</p>	<p>Why do you want to continue using remdesivir in COVID-19, when evidences are not supporting its use? (Multiple options can be opted)</p> <ul style="list-style-type: none"> • Guidelines of the state/central institute of excellence • Personal experience of benefit • Expert's recommendation • Patient's demand • Hospital's recommendation • Will not continue to use • Pre-clinical studies showed benefits • No other available options as antiviral other than remdesivir • Personal literature review • Others <p>(Samim, 2022)</p>
Trust in health care practitioners (U) - Facilitator	<p>Acceptance was close to 70% if the respondent's healthcare provider dispensed the drug or vaccine. Education is related to the decision to accept the drug or vaccine dispensed by a public health professional: 32.0% of those with less than a high school education indicated they would refuse a drug or vaccine dispensed by a public health professional, compared to 49.9% of those with a bachelor's degree or higher (Quinn, 2009)</p> <p>More trust in the HCP was associated with showing more acceptance towards paxlovid adjusted OR (95%CI): 1.49 (1.11, 1.99), p=0.008 (Soh, 2024)</p> <p>Doctor recommendation strongly increased willingness to take peramivir. Overall, the likelihood of taking peramivir increased across the conditions from "if doctor recommended" to "no alternative" for all groups Whites who trusted the FDA, trusted government action, and reported that the peramivir fact sheet was clearly presented were more willing to take peramivir if their doctor recommended it or if they were severely ill. Blacks who trusted the FDA, trusted government action, understood the peramivir fact sheet, and thought the information was clearly presented were more</p>	<p>"Our healthcare institutions, doctors, nurses and other healthcare professionals will be able to provide appropriate medical treatment to you if you contract the COVID-19 infection during the outbreak." (Soh, 2024)</p>

	<p>willing to take the drug if their doctor recommended it. When their doctor recommended peramivir, Hispanics who trusted the FDA, trusted government actions, but needed more information about the effectiveness of peramivir were still more willing to take the drug. (Quinn, 2015)</p>	
Trust in government and health authorities (P and U) - Facilitator	<p>More trust in the government communications was associated with showing more acceptance towards paxlovid adjusted OR (95%CI): 1.38 (1.09, 1.76), $p=0.008$ (Soh, 2024)</p> <p>Higher levels of trust in the FDA led to a greater likelihood of taking peramivir under the 4 conditions. Across all conditions, black participants who trusted the FDA and trusted government action were more likely to take the drug. Hispanics who trusted the FDA and trusted government actions were more willing to take peramivir if hospitalized (Quinn, 2015)</p> <p>Trust in the government impacted accepting the EUA drug for themselves and their children. Respondents who would accept the drug for themselves had a higher level of trust in the government than did those who refused ($p<0.001$), as did those who accepted the drug for their children ($p<0.05$). Higher levels of trust (OR 1.63; 95% CI 1.26-2.10; $p<0.001$) was associated with acceptance of the drug (Quinn, 2009)</p> <p>Higher perceived trust in the messages were predictive of adherence intentions. (D'Antoni, 2019)</p> <p>When asked about why they prescribed antivirals, doctors responded that: Acting on the recommendations of the Autorités de Santé (N =132) was of</p> <ul style="list-style-type: none"> - Low importance: 45% - Medium importance: 30% - High importance: 25% <p>in their decision making (Barthe, 2011)</p>	<p>The authorities will adequately communicate facts and information about COVID-19 to the public. (Soh, 2024)</p> <p>Please circle the number between the pair of words [Can't be trusted vs Can be trusted] that best describes your feelings about the information you have just read. (D'Antoni, 2019)</p>
Patient refusal (P) - Barrier	<p>Non-supply resulted from lack of requests [from patients]. (Gauld, 2021)</p>	<p>The following are commonly described barriers for access to Paxlovid. Please rank these from 1-5 in terms of how they</p>

	<p>Lack of patient interest emerged as a new barrier by survey distribution (10% to 62%; $P < .001$). (Wang, 2023)</p> <p>Respondents identified the following barriers for pregnant women when trying to obtain antiviral medications such as oseltamivir: pregnant women's lack of interest in taking antiviral medications (18%). (Dolan, 2012)</p> <p>The most common reason medications were not prescribed was due to patients declining treatment after an appointment with their provider. (Hart, 2024)</p> <p>The reasons given by physicians for not prescribing an antiviral were as follows: patient refusal (28%). (Gaillat, 2005)</p>	<p>affected to your institution during the weeks immediately after its release, with 1 being the most significant and 5 being the least significant.</p> <p>☐ Drug supply</p> <p>☐ Window of time for authorized use after symptom onset</p> <p>☐ Patient interest</p> <p>☐ Provider discomfort with prescribing</p> <p>☐ Consent and documentation process</p> <p>(Wang, 2023)</p> <p>Please rank the same barriers from 1-5 in terms of how they currently affect your institution.</p> <p>☐ Drug supply</p> <p>☐ Window of time for authorized use after symptom onset</p> <p>☐ Patient interest</p> <p>☐ Provider discomfort with prescribing</p> <p>☐ Consent and documentation process</p> <p>(Wang, 2023)</p> <p>In your opinion, which of the following are significant barriers to treatment of pregnant women treat influenza, such as oseltamivir, in your pharmacy? (Please select all that apply.)</p> <ul style="list-style-type: none"> - My pharmacy's corporate policy / protocol does not allow it - Cost/Co-pay is too high with antiviral medications to - Doctors are not prescribing influenza antiviral medications for their pregnant patients - Liability - Insufficient safety data Influenza antiviral medications are not available in general - Pregnant women are not interested in taking influenza antiviral medications - Cannot get supply of antiviral medication - None of the above - Other (specify) _____ <p>(Dolan, 2012)</p>
Conflicting advice (P) - Barrier	<p>Several providers noted some pharmacists advised their pregnant patients that antiviral medications should not be taken during pregnancy even though the providers had prescribed them. (Mersereau, 2012)</p>	NA

Industry influence (P) - Barrier	Concerns about the quality of scope of existing data (n=4). (Bassett, 2025)	<p>"I am concerned/frustrated about industry influence on producing misleading data." (Bassett, 2025)</p> <p>"The RCTs that let to licensure and use of oseltamivir were done in the outpatient setting. Need more data on special groups (at risk children for example)." (Bassett, 2025)</p>
Patient's requests (P) - Mixed	<p>When asked about why they prescribed antivirals, doctors responded that: Satisfying the patient's request (N =124) was of</p> <ul style="list-style-type: none"> - Low importance: 68% - Medium importance: 23% - High importance: 9% <p>in their decision making (Barthe, 2011)</p> <p>Influence of requests from families (n=5) (Bassett, 2025)</p> <p>Participants described how there was confusion on the part of patients about their options for accessing nirmatrelvir/ritonavir, which influenced patients' expectations and the ways they approached pharmacists. (Dahri, 2025)</p> <p>While there was occasional consumer pressure, usually the refusal to supply was reported to be handled well by the consumer. Doctors referred people to buy oseltamivir outside of the rules, including in advance of need and purchase outside the season. One interviewee reported an inappropriate supply by a recently qualified pharmacist colleague under considerable pressure by another health professional. High non-prescription sales in another pharmacy were primarily driven by the referral to the pharmacy of people about to travel, by nearby doctors. (Gauld, 2021)</p> <p>The other rationales to continue therapy with remdesivir was patient's demand (31, 16.8%) (Samim, 2022)</p>	<p>"I have been surprised at the number of parents wanting a Rx for Oseltamivir, even when provider expects minimal benefit (generally > 48 hours of symptoms)." (Bassett, 2025)</p> <p>"I try to follow the CDC guidelines, but so many people don't that I get a lot of pushback from families." (Bassett, 2025)</p> <p>"I think communication with the general public would be helpful, because . . . [we] would receive phone calls from patients, and they'd say, 'Oh, I've got COVID symptoms, can I get Paxlovid?' I'm not sure how well that information was actually communicated to the general public . . . patients should not be going to the prescriber and demanding Paxlovid, right?" (Dahri, 2025)</p> <p>Why do you want to continue using remdesivir in COVID-19, when evidences are not supporting its use? (Multiple options can be opted)</p> <ul style="list-style-type: none"> • Guidelines of the state/central institute of excellence • Personal experience of benefit • Expert's recommendation • Patient's demand • Hospital's recommendation • Will not continue to use • Pre-clinical studies showed benefits • No other available options as antiviral other than remdesivir • Personal literature review • Others <p>(Samim, 2022)</p>

<p>Patient–practitioner communication about benefits and harms (P) - Mixed</p>	<p>Importance of shared decision making with family (n=17). (Bassett, 2025)</p> <p>Clinical factors considered in decision-making: Duration of illness (n=25) (Reviewer comments: this factor is about fear of parents not being overly cautious. (Bassett, 2025)</p>	<p>"I often do shared decision-making with families on whether to prescribe it. I like to cover the benefits in terms of symptom reduction/length of illness and lower hospitalization risk, with the common side effects (GI upset, headaches, and neuropsych symptoms). Most patients/families decline it after this discussion." (Bassett, 2025)</p> <p>"My likelihood of prescribing almost always hinges on shared decision making with the family about risks and benefits." (Bassett, 2025)</p> <p>"I often do shared decision making with families. I discuss benefits and side effects. I will provide a prescription and let them decide if they want to try it. I also let them know to stop the medication if the child is experiencing side effects." (Bassett, 2025)</p> <p>"I offer if kid is within 48 hours of onset even if child o/w healthy because I'm afraid that patient will be the one previously healthy kid who has a bad outcome and didn't at least discuss tamiflu with parent." (Bassett, 2025)</p>
<p>Absence of a healthcare-practitioner recommendation (P and U) - Mixed</p>	<p>Reasons for business travelers to take the antivirals: - It was recommended 2 (4.3%) (Helfenberger, 2010)</p> <p>Non-supply resulted from lack of recommendation by pharmacists. (Gauld, 2021)</p> <p>Respondents identified the following barriers for pregnant women when trying to obtain antiviral medications such as oseltamivir: physicians not prescribing antiviral medications for their pregnant patients (30%). (Dolan, 2012)</p>	<p>Why did you take the antiviral medication? (multiple answers possible, only answered by the travelers who used antiviral medication on their last business trip) (Helfenberger, 2010)</p> <p>In your opinion, which of the following are significant barriers to treatment of pregnant women treat influenza, such as oseltamivir, in your pharmacy? (Please select all that apply.)</p> <ul style="list-style-type: none"> - My pharmacy's corporate policy / protocol does not allow it - Cost/Co-pay is too high with antiviral medications to - Doctors are not prescribing influenza antiviral medications for their pregnant patients - Liability - Insufficient safety data Influenza antiviral medications are not available in general - Pregnant women are not interested in taking influenza antiviral medications - Cannot get supply of antiviral medication - None of the above

		- Other (specify) _____ (Dolan, 2012)
Discussing antiviral use with others (P and U) - Mixed	<p>Most of the HCWs (31 of 36; 86.1%) knew someone else taking oseltamivir, and 19 (52.7%) discussed the drug with this other person. All 10 HCWs who had discussions with someone else taking oseltamivir without problems completed the course of therapy, whereas 4 of 9 (44.5%) who discussed the drug with a person reporting a problem did not complete the course (P= .02, c2 test) (Upjohn, 2012)</p> <p>Statistically significant multivariable associations of a new IILI problem/diagnosis being prescribed an NAI include seeking assistance from a supervisor (OR 2.89 (95% CI 1.18 to 7.09), p=0.020) (Moller, 2023)</p>	NA
Emotion		
Anticipated regret (U) - Facilitator	Higher anticipated regret was predictive of adherence intentions. (D'Antoni, 2019)	I would feel regret if I had not taken antivirals and ended up getting the pandemic flu D'Antoni, 2019)
Worry (U) - Barrier	<p>The term experimental led to less likelihood of the participants taking the drug for all groups under all conditions except for Hispanics when there were no alternatives. Hispanics who were worried about the term experimental were less likely to take the drug even if they were severely ill. Under the condition of no alternative, needing more information about the drug's effectiveness and worry about the term experimental did not negatively affect willingness. (Quinn, 2015)</p> <p>A higher degree of worry about accepting the drug was associated with refusal: 66.9% of those who are moderately to extremely worried about accepting the drug said they would refuse it for themselves, compared with only 23.3% of those who are "not at all" or slightly worried (Table 5; p < 0.001), greater worry was associated with nonacceptance of the drug (OR 0.15; 95% CI 0.11-0.21; p<0.001) (Quinn, 2009)</p> <p>Accepting the Emergency Use Authorization (EUA) drug for</p>	NA

	one's child was associated the degree of worry about the drug. Those with a high degree of worry about the EUA drug had lower odds of accepting the drug for their children (OR 0.194; 95% CI 0.12-0.31; $p < 0.001$ (Quinn, 2009)	
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