INTEGRATED INSTITUTE OF MEDICINE · GP CONTINUING EDUCATION · 2026

Antivirals in General Practice

What's worth prescribing?

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60-minute educational session | July 2026

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BEFORE WE START

Scope, disclosures and how to use this deck

What this session IS

A practical, evidence-based guide to antiviral prescribing within the everyday scope of South African general practice — influenza, HSV, VZV, COVID-19, and the primary-care face of hepatitis and HIV.

What this session is NOT

It is not a specialist manual for ART regimen construction, transplant CMV management, chronic hepatitis B treatment selection or intensive care. Those decisions belong with a specialist — we will flag exactly when.

Disclosures

No pharmaceutical funding, sponsorship or honoraria relating to any product discussed. I am employed by JDJ Pathology Laboratories, a private diagnostic laboratory.

Using the deck

Every slide carries its source. Slide 44 is a one-page prescribing summary designed to be printed and kept in the consulting room. A full reference list closes the deck.

LEARNING OBJECTIVES

By the end of this hour you should be able to…

1 Decide

Apply a structured five-question approach to decide whether any given patient in front of you actually needs an antiviral.

2 Time

State the therapeutic window for each common viral infection and explain why a late prescription is a wasted one.

3 Prescribe

Prescribe first-line agents for influenza, HSV, VZV and COVID-19 at correct dose, duration and renal adjustment.

4 Avoid

Identify the interactions, adverse effects and contraindications that most often cause harm in primary care.

5 Refer

Recognise the clinical situations that require same-day specialist referral rather than a script.

6 Steward

Articulate the stewardship case for not prescribing, and counsel the patient who expects a prescription.

Notice that four of the six objectives are about restraint, timing and safety — only one is about writing the script.

SESSION ROADMAP

Where we are going in the next 60 minutes

1	**Foundations**	How antivirals work, why timing dominates outcome, and the five questions	8 min
2	**Influenza**	NICD 2026 position, who to treat, oseltamivir and baloxavir	10 min
3	**HSV & VZV**	Episodic vs suppressive therapy, the 72-hour zoster window, shingles vaccine	14 min
4	**COVID-19 & other RTIs**	Who still benefits, and the interaction trap	8 min
5	**Hepatitis & HIV**	The GP's real job: screen, interpret, refer, prevent	10 min
6	**Prescribing safely**	Renal dosing, interactions, cost, stewardship, referral	10 min

WHY THIS MATTERS

The problem is not access to antivirals. It is aim.

More than 90 antiviral drugs have been licensed since idoxuridine in 1963 — yet they cover barely a dozen human viruses. In primary care the failure mode is rarely "the drug did not exist". It is that the right patient was not identified, or was identified too late.

~25%

of influenza-like illness swabs are PCR-positive for influenza during the SA season — three in four are something else entirely

2.74 m

South Africans live with chronic hepatitis B; only about 23% have ever been diagnosed

≈1 day

is the symptom reduction oseltamivir buys in uncomplicated influenza — the entire clinical benefit in a low-risk adult

72 h

is the window in which antiviral therapy for herpes zoster still meaningfully changes the acute illness

Every one of those numbers is an argument for better selection and faster recognition — not for more prescriptions.

NICD Influenza guidelines, April 2026; Gao Y et al. JAMA Intern Med 2025;185:293–301; CDA Foundation / Coalition for Global Hepatitis Elimination, South Africa profile 2025.

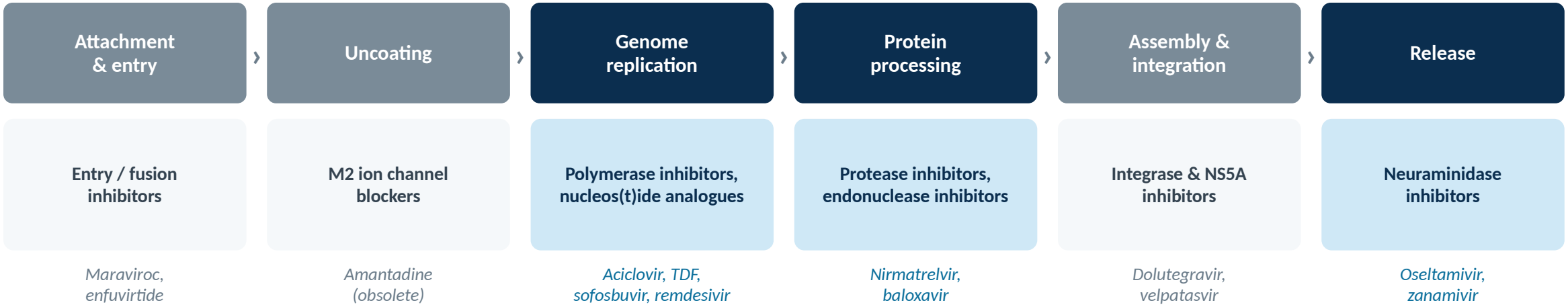
PART ONE

Foundations

What antivirals actually do to a virus, why the therapeutic window is so unforgiving, and the five questions to ask before the pen touches the script pad.

Antivirals interrupt one step in the replication cycle

Viruses replicate using the host cell's own machinery, so there are far fewer virus-specific targets than there are bacterial ones. This is why antivirals have narrow spectra, why one drug rarely covers two viruses, and why they suppress replication rather than sterilise the host.



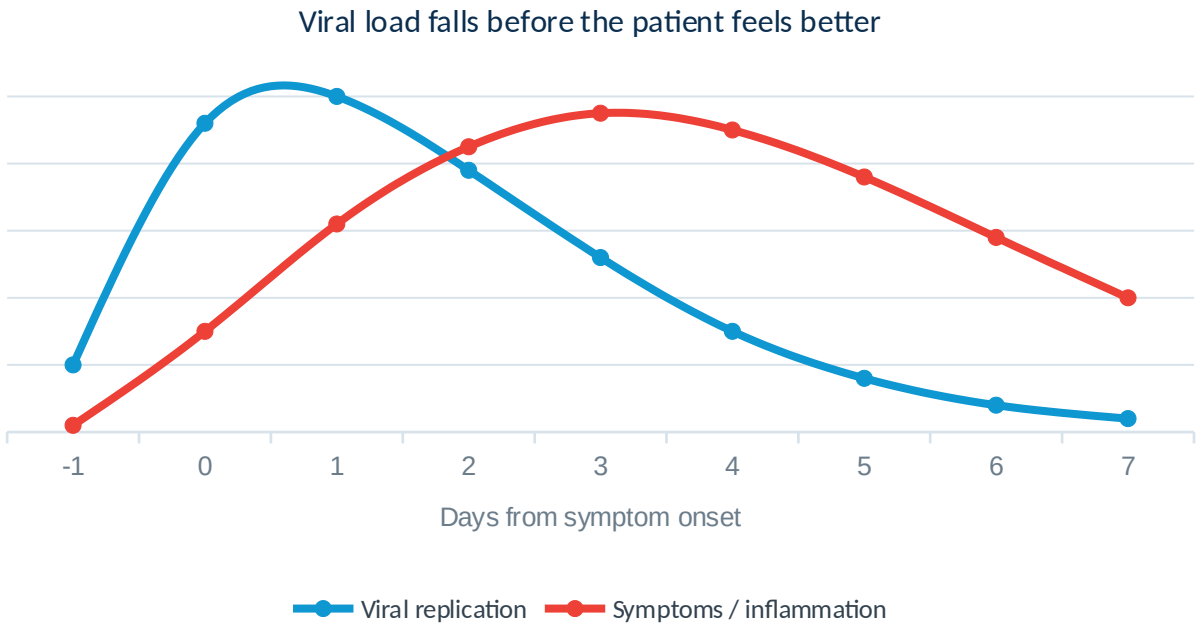
Navy = the three steps targeted by drugs a GP will actually write

Two clinical consequences: antivirals only work while the virus is actively replicating, and they do not clear latent virus — which is why HSV and VZV recur, and why HBV needs long-term suppression.

De Clercq E, Li G. Clin Microbiol Rev 2016;29:695–747; Burrell CJ et al. Fenner & White's Medical Virology, 5th ed.

THE SINGLE MOST IMPORTANT PRINCIPLE

Timing is not a detail. It is the whole intervention.



Schematic. Peak viral replication is over before most patients reach the waiting room.

Before symptoms

Prophylaxis territory — vaccines, PEP, PrEP. Almost never a treatment decision in the consulting room.

The therapeutic window

Replication is still high and drug can suppress it. This is the only period in which a treatment antiviral earns its cost.

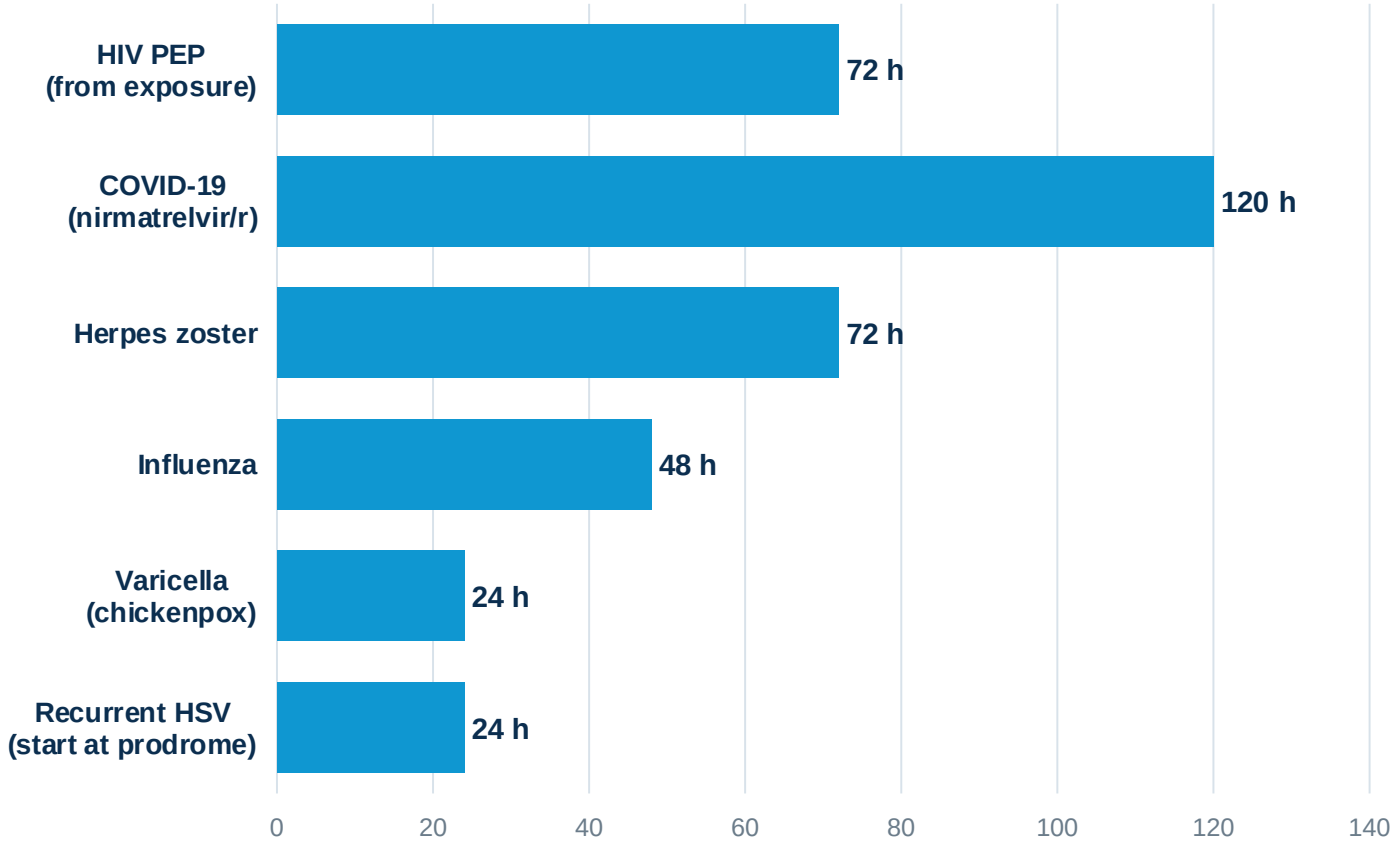
After the window

Damage is now immune-mediated. Antivirals add cost, side-effects and resistance pressure without adding benefit.

If the patient is already past the window, the honest and more useful consultation is about symptom control, red flags and — where relevant — vaccination for next time.

NICD Influenza guidelines, April 2026; Whitley RJ et al.; Wood MJ et al. Antiviral therapy of acute herpes zoster; NIH COVID-19 Treatment Guidelines.

How long you have, from symptom or rash onset



Earlier is always better

These are outer limits, not targets. Benefit decays continuously — a zoster script at 20 hours does more than the same script at 70 hours.

The window can be extended

In severe, progressive or hospitalised illness, and in the immunocompromised, treat even beyond the window — virus is still replicating.

The window does not apply to suppression

Chronic suppressive therapy (recurrent HSV, chronic HBV, ART) has no onset clock. Do not confuse the two.

NICD Influenza guidelines 2026; CDC/IDSA herpes zoster and HSV guidance; NIH COVID-19 Treatment Guidelines; SA NDoH National Guidelines for the Management of Viral Hepatitis 2019.

A DECISION FRAMEWORK

Five questions before you write an antiviral

1 **Is this actually a virus — and which one?** — Diagnosis

Clinical syndrome plus epidemiology. Do not treat a bacterial or non-infective diagnosis with an antiviral, and do not assume influenza in October.

2 **Does an effective agent exist for it?** — Availability

Rhinovirus, most coronaviruses, adenovirus, enterovirus, parainfluenza, hMPV, mumps, measles, EBV, dengue: no useful antiviral in primary care.

3 **Am I still inside the therapeutic window?** — Timing

Count hours from symptom or rash onset, not from the day the patient decided to come in. Document the onset time in the notes.

4 **Will this patient benefit enough to justify it?** — Benefit

Risk-stratify. The same drug that is essential in a 74-year-old with COPD is near-worthless in a healthy 28-year-old.

5 **What could this drug do to this patient?** — Harm

Renal function, interacting chronic medication, pregnancy, age. Check before, not after.

A "no" at any step ends the decision. Most inappropriate antiviral prescriptions in primary care fail at question 3 or question 4.

Framework adapted from antimicrobial stewardship principles; NICD 2026; WHO Clinical practice guidelines for influenza 2024.

PART TWO

Influenza

The commonest antiviral request you will receive, the one with the weakest evidence in the well patient, and the one with the clearest benefit in the right patient.

Influenza here is seasonal, substantial, and shaped by HIV

The South African season

Circulation typically April–September, peaking May–July. In 2025 the season ran from week 13 to week 30 and was dominated by A(H3N2). Schematic, based on NICD surveillance.

2026 Southern Hemisphere vaccine — trivalent only

- A/Missouri/11/2025 (H1N1)pdm09-like virus
- A/Singapore/GP20238/2024 (H3N2)-like virus
- B/Austria/1359417/2021 (B/Victoria lineage)-like virus
- **Both influenza A components changed from 2025. The quadrivalent vaccine is not available in South Africa this season; B/Yamagata has not circulated since March 2020.**

8–10% of patients hospitalised with pneumonia test positive for influenza — rising to 20–40% of adults admitted with pneumonia during the season

~30% of influenza-associated deaths in South Africans aged ≥5 years occur in people living with HIV

2.8× the influenza mortality risk in pregnant compared with non-pregnant women of childbearing age

138 / 100 000 influenza-associated death rate in adults aged ≥65 years — the highest of any age band

Your highest-value influenza intervention is not a prescription pad in July. It is a vaccination conversation in March.

NICD. Influenza: recommendations for diagnosis, management, prevention and public health response, v1.8, April 2026; Tempia S et al. Clin Infect Dis 2019;69:1036–48.

RISK STRATIFICATION

Who is at risk of severe or complicated influenza?

This list does the work of the whole influenza section. Antiviral treatment is directed at people on it — or at anyone, of any risk, who is already severely ill.

Age extremes

- Adults aged ≥65 years
- Children <5 years, especially <1 year

Pregnancy

- All stages of pregnancy
- Up to 6 weeks postpartum

Immune compromise

- People living with HIV
- Immunosuppressive therapy, malignancy

Chronic lung disease

- Asthma, COPD
- Tuberculosis — a specific SA risk factor

Other chronic disease

- Cardiac disease (not simple hypertension)
- Diabetes, renal disease, hepatic disease

Neurological & other

- Epilepsy, stroke, cerebral palsy, neuromuscular disease
- Haemoglobinopathies; BMI ≥40; ≤18 years on chronic aspirin

Tuberculosis and HIV place South African risk stratification meaningfully apart from European and North American guidance — do not simply import a UK or US algorithm.

NICD Influenza guidelines v1.8, April 2026, section 4.1; WHO Clinical practice guidelines for influenza, 2024.

Suspected influenza: test, treat, or neither?

Do not test routine ILI

Laboratory testing of uncomplicated ILI adds nothing to the management of that individual patient.

Never delay for a result

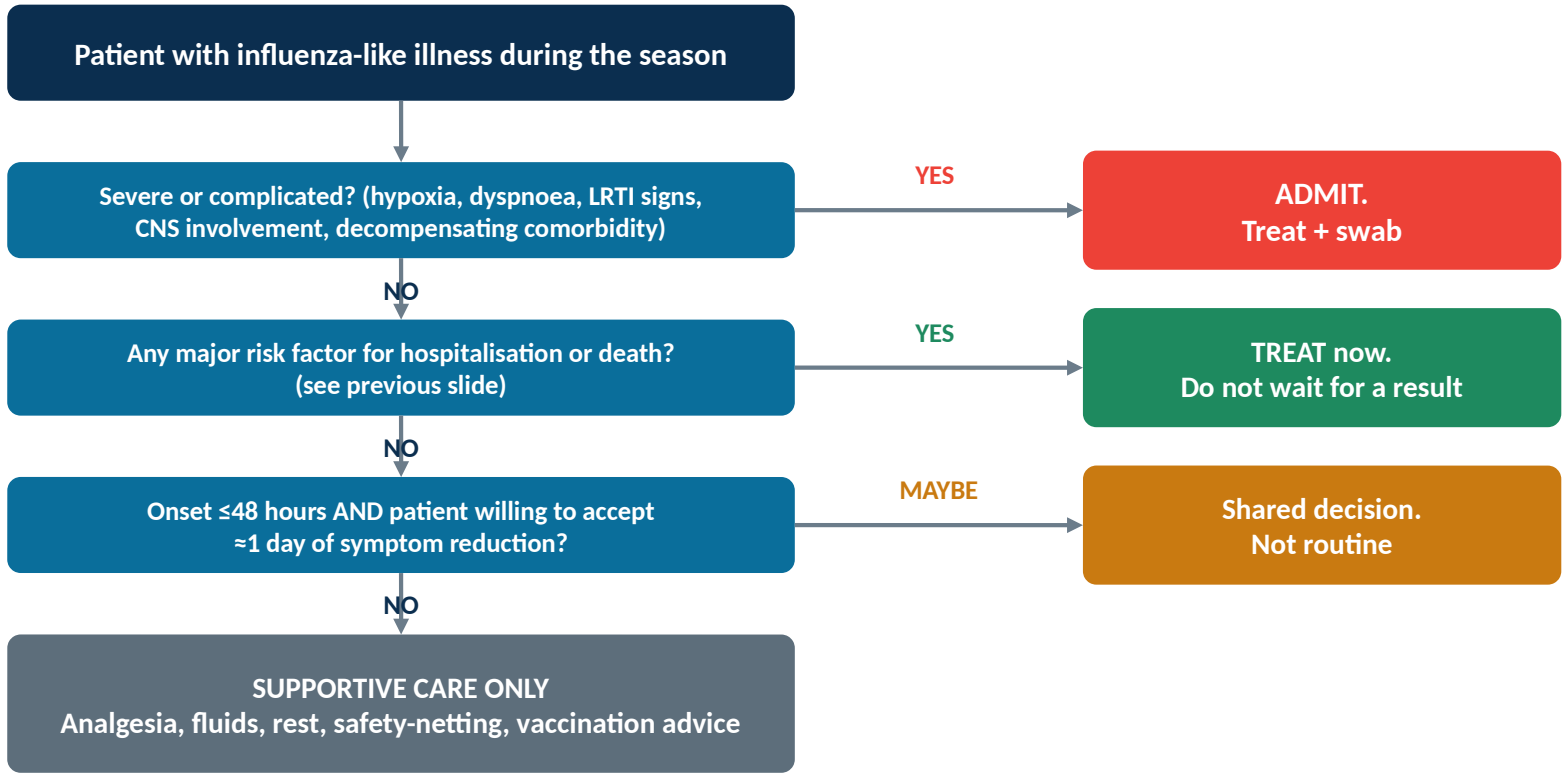
Initial treatment decisions are clinical. Start, then swab if a result will change something.

A negative rapid test means little

Sensitivity of rapid antigen tests is only 59–93%. A negative result does not exclude influenza.

Do test in clusters

In an outbreak in a school, care home or facility, swab the first 2–3 cases only.



Community-acquired pneumonia in season deserves special mention: consider adding oseltamivir empirically, and cover secondary bacterial infection with co-amoxiclav.

NICD Influenza guidelines v1.8, April 2026, sections 5 and 6; WHO 2024.

Influenza antivirals available in South Africa

Agent	Class & target	Adult dose	Paediatric dose	Key cautions
Oseltamivir (Tamiflu®)	Neuraminidase inhibitor — blocks release of progeny virions. Active against influenza A and B.	**75 mg PO twice daily for 5 days**	1 day–12 months: 3 mg/kg BD ≤15 kg: 30 mg BD >15–23 kg: 45 mg BD >23–40 kg: 60 mg BD >40 kg: 75 mg BD (all for 5 days)	Nausea and vomiting — take with food. Dose-reduce in renal impairment. Rare neuropsychiatric events reported in children and adolescents.
Baloxavir (Xofluza®)	Cap-dependent endonuclease inhibitor — blocks viral mRNA transcription. Active against influenza A and B.	**Single oral dose** **20–<80 kg: 40 mg** **≥80 kg: 80 mg**	≥5 years, by weight <20 kg: 2 mg/kg suspension 20–<80 kg: 40 mg (single dose)	Limited availability in SA. Resistance emerges more readily than with oseltamivir — use with caution in the immunocompromised. Not recommended in pregnancy or postpartum.
Zanamivir (inhaled)	Neuraminidase inhibitor. Removed from NICD guidance in 2023 following WHO review.	**Not recommended**	Not recommended	Risk of bronchospasm in asthma and COPD; WHO found no evidence of benefit.
Amantadine / rimantadine	M2 ion-channel blockers. Influenza A only.	**Obsolete**	Obsolete	Near-universal resistance in circulating strains. Do not prescribe.

Practical reality: oseltamivir is what you will actually be able to obtain. Baloxavir's single-dose convenience is attractive but supply in South Africa is limited and it is not on the EML.

NICD Influenza guidelines v1.8, April 2026, Table 1. Neither agent appears on the National Essential Medicines List; oseltamivir may be motivated for severe influenza-associated hospitalisation.

What the evidence for influenza antivirals actually shows

The evidence base has shifted substantially since 2023, and the guidance has followed it. If you are still describing oseltamivir to patients the way it was described in 2010, the conversation needs updating.

Non-severe influenza, low-risk patient	Oseltamivir has little or no effect on hospital admission or mortality (high certainty). Symptom duration shortened by roughly one day.	**No routine treatment**
Non-severe influenza, high-risk patient	Oseltamivir: little or no effect on admission (risk difference −0.4%, high certainty). Baloxavir may reduce admission (−1.6%, low certainty) and probably reduces symptom duration by ~1 day.	**Treat — risk–benefit**
Severe or hospitalised influenza	Low-certainty evidence that oseltamivir may reduce duration of hospitalisation by ~1.6 days. Effect on mortality remains uncertain.	**Treat**
Chemoprophylaxis after exposure	Not routinely recommended. WHO allows presumptive treatment only for the extremely high-risk exposed patient.	**Vaccinate instead**

How to say it: "There is a medicine, but in someone like you it shortens the illness by about a day and does not reduce your chance of ending up in hospital. What will help you most is rest, fluids, and knowing which symptoms mean you should come back."

Gao Y et al. JAMA Intern Med 2025;185:293–301 (73 RCTs); Gao Y et al. Lancet 2024;404:753–63; Baghdadi JD et al. JAMA Intern Med 2025;185:301; WHO 2024; NICD 2026.

PART THREE

Herpes simplex & varicella-zoster

The infections where a GP's antiviral prescription most reliably changes the patient's experience — provided it is written early enough and at the right dose.

Three prescribing decisions, not one

Aciclovir, valaciclovir and famciclovir are all activated by viral thymidine kinase, so they concentrate 40–100-fold inside infected cells and leave uninfected cells essentially untouched. They differ in bioavailability and dosing convenience — not in efficacy.

First episode

Treat every first episode of genital herpes, regardless of how long it has been going, because primary disease is prolonged and can be severe.

7–10 days

Episodic recurrence

Only worth it if the patient can start at prodrome or within 24 hours. Give the patient a script to hold at home.

1–5 days

Suppression

For ≥6 recurrences a year, severe recurrences, psychological distress, or to reduce transmission to a susceptible partner.

Continuous

Indication	Aciclovir	Valaciclovir	Famciclovir
Genital HSV — first episode	400 mg TDS × 7–10 days	**1 g BD × 7–10 days**	250 mg TDS × 7–10 days
Genital HSV — episodic recurrence	800 mg TDS × 2 days	**500 mg BD × 3 days**	1 g BD × 1 day
Genital HSV — suppression	400 mg BD continuous	**500 mg daily continuous**	250 mg BD continuous
Herpes labialis (cold sore)	Topical adds little	**2 g BD × 1 day (2 doses)**	1.5 g as a single dose
Any HSV in advanced HIV	Higher dose, longer duration — discuss	1 g BD until lesions heal	500 mg BD until healed

Valaciclovir's higher bioavailability and simpler schedule buy adherence, which in practice matters more than any pharmacological difference between the three.

Aciclovir, valaciclovir and famciclovir prescribing information; CDC STI Treatment Guidelines; IUSTI/WHO genital herpes guidance.

Pitfalls, special situations and when to refer

Do not rely on topical antivirals

Topical aciclovir cream has minimal effect on genital herpes and only marginal effect on cold sores. If treatment is indicated, treat systemically.

Do not start episodic therapy on day 4

Once lesions have crusted, the replication phase is over. Offer analgesia, saline bathing, and a script to keep at home for next time.

Review suppression annually

Discuss stopping after 12 months to reassess recurrence frequency — natural history improves over time. Do not leave it on repeat indefinitely.

Suppression reduces transmission

In HSV-2 discordant couples, valaciclovir 500 mg daily reduced acquisition by the susceptible partner by roughly half. Condoms and disclosure still matter.

Type-specific serology has limited value

Do not use HSV IgG to diagnose an acute lesion. Swab the lesion for PCR — that is the test that answers

Refer or escalate today

- **Suspected HSV encephalitis**
- Fever, confusion, seizure, focal signs — start IV aciclovir empirically and admit. Do not wait for imaging or PCR.
- **Neonatal HSV**
- Any vesicle, sepsis picture or seizure in the first 6 weeks. Admit for IV therapy.
- **Herpetic eye disease**
- Dendritic ulcer or red painful eye — same-day ophthalmology. Never a topical steroid.
- **Eczema herpeticum**
- Widespread vesicles on eczematous skin — admit.
- **Genital herpes in pregnancy**
- First episode in the third trimester needs obstetric input. Suppression from 36 weeks reduces the need for caesarean section.
- **Frequent, severe or atypical HSV**
- Test for HIV. Consider aciclovir resistance if lesions fail to respond.

A patient with genital herpes needs a conversation about transmission, partner notification and HIV testing at least as much as they need a script.

CDC STI Treatment Guidelines; RCOG/BASHH management of genital herpes in pregnancy; Corey L et al. N Engl J Med 2004;350:11–20.

Chickenpox: most children need nothing, some people need treating

Varicella in an otherwise healthy child is a self-limiting illness and routine antiviral treatment is not recommended. The decision turns entirely on host factors and on whether you are still within 24 hours of the rash appearing.

Treat with an antiviral

- Adolescents ≥12 years and adults — more severe disease and higher pneumonitis risk
- Pregnant women (specialist advice; risk of varicella pneumonia)
- Immunocompromised patients of any age — including advanced HIV, chemotherapy, high-dose steroids
- Chronic cutaneous or pulmonary disease
- Patients on chronic salicylates or chronic corticosteroids
- Secondary household cases — they acquire a higher inoculum and get sicker
- **Best within 24 hours of the first vesicles.**

Supportive care is enough

- Healthy, immunocompetent child under 12 years
- Presenting more than 24 hours after the rash started with no risk factors
- **What to advise instead:**
  - Paracetamol — avoid ibuprofen (associated with severe soft-tissue infection) and never aspirin in children
  - Calamine, oral antihistamine at night, short nails, cool baths
  - Exclude from school until all lesions have crusted
  - Keep away from pregnant women, neonates and immunocompromised contacts
  - **Safety-net: spreading redness, breathlessness, drowsiness, dehydration**

Group	Regimen	Duration
Adults and adolescents ≥12 years	**Aciclovir 800 mg PO five times daily**	7 days
Children ≥2 years (where indicated)	Aciclovir 20 mg/kg PO four times daily (maximum 800 mg per dose)	5 days
Immunocompromised or complicated	**IV aciclovir — admit**	Specialist-directed

Aciclovir prescribing information; AAP Red Book; UK Green Book chapter 34. Varicella vaccine is not part of the South African EPI schedule and is available privately.

Shingles: the 72-hour decision

Agent	Adult regimen	Duration	Practical note
Valaciclovir	**1 g PO three times daily**	7 days	Preferred where affordable — three doses a day is far more achievable than five
Famciclovir	500 mg PO three times daily	7 days	Equivalent efficacy; availability and cost vary
Aciclovir	800 mg PO five times daily	7 days	Cheapest and most widely available, but adherence to five doses a day is poor

Treat — even if you are unsure

- Anyone within 72 hours of rash onset
- Age ≥50 years — highest risk of post-herpetic neuralgia
- Moderate or severe pain, or severe rash
- Any immunocompromise, including HIV
- Ophthalmic, otic or any non-truncal distribution
- Beyond 72 hours if new vesicles are still forming, or if the patient is immunocompromised or has complicated disease

Three things to do at the same visit

- **1. Offer an HIV test if the patient is under 50.**
  - Zoster in a younger adult is a recognised early clinical indicator of HIV infection in our setting.
- **2. Start analgesia properly from day one.**
  - Under-treated acute pain predicts post-herpetic neuralgia. Do not stop at paracetamol.
- **3. Check renal function before high-dose therapy.**
  - Especially in anyone over 65 or on an ACE inhibitor, ARB or diuretic.

Antivirals shorten the rash, reduce acute pain and reduce viral shedding. Their effect on preventing post-herpetic neuralgia is real but modest — so treat the pain aggressively as well.

Aciclovir, valaciclovir and famciclovir prescribing information; Dworkin RH et al. Clin Infect Dis 2007;44(Suppl 1):S1–26; NICE CKS herpes zoster.

Complicated zoster: recognise it, refer it, do not just script it

Herpes zoster ophthalmicus

Rash in the V1 distribution, especially with Hutchinson's sign (lesions on the tip or side of the nose). Risk of keratitis, uveitis, and permanent visual loss.

→ **Same-day ophthalmology + oral antiviral now**

Ramsay Hunt syndrome

Facial nerve palsy with vesicles in the ear canal or on the palate, often with vertigo, tinnitus or hearing loss.

→ **Urgent ENT; antiviral plus corticosteroid**

Disseminated zoster

More than about 20 vesicles outside the primary and adjacent dermatomes, or involvement of more than two dermatomes.

→ **Admit for IV aciclovir; assume immunocompromise**

Zoster in significant immunocompromise

Advanced HIV, transplant, chemotherapy, high-dose steroids, biologics. Higher risk of dissemination and visceral involvement.

→ **Discuss with a specialist the same day**

Neurological involvement

Meningism, encephalopathy, myelitis, motor weakness in the affected myotome, or new stroke symptoms after zoster.

→ **Admit**

Sacral zoster

May cause urinary retention or constipation through autonomic involvement.

→ **Treat; monitor bladder function**

A useful rule: zoster above the clavicle, zoster crossing dermatomes, or zoster in an immunocompromised host is not a routine general practice prescription.

Dworkin RH et al. Clin Infect Dis 2007; Gnann JW, Whitley RJ. N Engl J Med 2002;347:340–6; Royal College of Ophthalmologists herpes zoster ophthalmicus guidance.

Post-herpetic neuralgia — and the vaccine that finally arrived

Post-herpetic neuralgia

- **Definition and risk**
  - Pain persisting beyond 90 days from rash onset. Risk rises steeply with age, severity of acute pain, and severity of rash.
- **What antivirals do**
  - They reduce acute pain and shorten shedding. The effect on preventing PHN is modest and inconsistent across trials — antivirals alone are not a PHN strategy.
- **Corticosteroids**
  - No convincing role in preventing PHN. Reserve for Ramsay Hunt syndrome or severe acute pain, with an antiviral, and weigh the risks.
- **First-line pharmacological options**
  - Amitriptyline or nortriptyline (start low, watch anticholinergic effects in the elderly); gabapentin or pregabalin (titrate, dose-reduce in renal impairment); topical lidocaine or capsaicin for localised pain.
- **Refer to a pain service if pain is uncontrolled at 3 months.**

Recombinant zoster vaccine (Shingrix®)

NEW IN SOUTH AFRICA — 2026

- Registered by SAHPRA in June 2026 after a long absence of any shingles vaccine — Zostavax was discontinued globally in March 2024 and Shingrix previously required a Section 21 application
- Adjuvanted recombinant subunit vaccine — not live, so it can be given to immunocompromised patients
- Two doses, 2–6 months apart, intramuscular; Schedule 4, so a prescription is required
- Roughly 90% efficacy against herpes zoster in the pivotal trials
- **Launch price approximately R2 783 per dose including VAT — about R5 566 for the course before administration fees**
- Private sector first; public sector access depends on National Advisory Group on Immunisation review. Medical scheme cover is not yet established.

Expect to be asked about this. Be ready with the honest answer: highly effective, safe in immunocompromise, and expensive enough that access will be uneven.

Dworkin RH et al. Clin Infect Dis 2007; SAHPRA registration of Shingrix, June 2026; GSK / Spotlight, June 2026. Prices are indicative and exclude administration fees.

PART FOUR

COVID-19 and respiratory viruses

A narrower indication than in 2021, a wider interaction problem than most prescribers appreciate — and a long list of respiratory viruses for which there is still nothing to prescribe.

Antiviral therapy is now a targeted, not a universal, intervention

With high population immunity, the absolute benefit of outpatient antiviral therapy has fallen sharply in the healthy, vaccinated adult. The drug still matters — but the indication is now defined by risk of progression, not by a positive test.

	Nirmatrelvir/ritonavir (Paxlovid®)	Molnupiravir	Remdesivir
Mechanism	Oral SARS-CoV-2 main protease (Mpro) inhibitor; ritonavir is a pharmacokinetic booster, not an antiviral here	Oral nucleoside analogue causing lethal mutagenesis of viral RNA	IV RNA-dependent RNA polymerase inhibitor
Dose	**300 mg / 100 mg PO twice daily for 5 days**	800 mg PO twice daily for 5 days	3-day outpatient IV course
Start within	**5 days of symptom onset**	5 days of symptom onset	7 days of symptom onset
Place in therapy	**First line for the non-hospitalised high-risk adult not requiring oxygen**	Alternative only when the first two are unsuitable or unavailable; lower efficacy	Where oral therapy is contraindicated; not practical in general practice
Do not use if	eGFR <30; severe hepatic impairment; unavoidable interacting drug	Pregnancy, breastfeeding, or age <18 years	Requires infusion capacity

Who to treat

Age ≥65; unvaccinated or long since vaccinated; immunocompromise; significant chronic cardiac, pulmonary, renal, hepatic or neurological disease; diabetes; obesity; pregnancy (specialist input); advanced HIV.

Who not to treat

The vaccinated, immunocompetent adult under 60 with mild illness and no comorbidity. The absolute benefit is very small and the interaction risk is not.

What has no role

Azithromycin, doxycycline, ivermectin, hydroxychloroquine, high-dose vitamin regimens, and corticosteroids in an outpatient who is not hypoxic.

NIH COVID-19 Treatment Guidelines; SAHPRA registration of Paxlovid, January 2023; Boulle A et al. S Afr Med J 2023. Confirm current national guidance and product availability before prescribing.

THE SINGLE BIGGEST PRESCRIBING HAZARD IN THIS DECK

Nirmatrelvir/ritonavir: check every drug, every time

Ritonavir is a potent CYP3A4 inhibitor. A five-day course can produce dangerous accumulation of a chronic medicine the patient has taken safely for years. This is the most common cause of serious harm from an antiviral prescribed in primary care.

Contraindicated

Do not co-prescribe

- Simvastatin, lovastatin
- Rivaroxaban
- Carbamazepine, phenytoin, phenobarbital
- Rifampicin, St John's wort
- Amiodarone, dronedarone, flecainide, quinidine
- Ergotamine, dihydroergotamine
- Sildenafil for pulmonary hypertension
- Alfuzosin, ranolazine, lurasidone, pimozide
- Colchicine in renal or hepatic impairment
- Oral midazolam, triazolam

Requires action

Hold, reduce or monitor

- Atorvastatin, rosuvastatin — hold during and for 2–3 days after
- Apixaban — reduce or switch; warfarin — monitor INR
- Tacrolimus, ciclosporin — specialist supervision
- Amlodipine, diltiazem, verapamil — halve dose, monitor BP
- Corticosteroids, including inhaled fluticasone and budesonide
- SSRIs, trazodone, quetiapine — sedation, serotonergic effects
- Fentanyl, oxycodone, methadone — respiratory depression
- Clopidogrel — reduced activation; consider prasugrel
- Sildenafil for erectile dysfunction — maximum 25 mg /

Generally safe

No routine adjustment

- Pravastatin, fluvastatin
- Dabigatran, edoxaban (with monitoring)
- Levetiracetam, lamotrigine, valproate
- Metformin, sulfonylureas, insulin, SGLT2 inhibitors
- ACE inhibitors, ARBs, thiazides, beta-blockers
- Paracetamol, NSAIDs
- Most antibiotics — avoid clarithromycin
- Dolutegravir-based ART
- Montelukast, most antihistamines

Renal dosing eGFR 30–59: reduce to nirmatrelvir 150 mg with ritonavir 100 mg twice daily. eGFR <30: do not use.

COVID rebound Rebound of symptoms or test positivity after the course is usually mild. It is not treatment failure and does not warrant a second course.

Non-negotiable workflow: reconcile the full medicine list — including over-the-counter and herbal products — run it through the Liverpool checker, and document the check. If a critical interaction cannot be managed, this patient is not a candidate for the drug.

Ritonavir-boosted nirmatrelvir prescribing information (boxed warning for drug interactions); University of Liverpool COVID-19 Drug Interactions checker (covid19-druginteractions.org).

Where there is nothing to prescribe — and what to do instead

Virus	Typical primary-care presentation	Antiviral?	What actually helps
Rhinovirus	The common cold; asthma and COPD exacerbations	None	Symptomatic care; treat the exacerbation, not the virus
RSV	Bronchiolitis in infants; significant lower respiratory illness in the elderly	None in GP	Oxygen, feeding support, admission criteria. Nirsevimab (a long-acting monoclonal) and maternal RSV vaccine are preventive, not treatments
Human metapneumovirus	Bronchiolitis and influenza-like illness	None	Supportive care only
Parainfluenza	Croup, bronchiolitis	None	Dexamethasone for croup; nebulised adrenaline if severe
Adenovirus	Pharyngoconjunctival fever, gastroenteritis	None in GP	Supportive; cidofovir is a specialist option in severe immunocompromise only
Seasonal coronaviruses	Common cold	None	Symptomatic care
Influenza A and B	Abrupt fever, myalgia, dry cough	Yes — selected	See the influenza algorithm; vaccinate
SARS-CoV-2	Variable; often indistinguishable from other respiratory viruses	Yes — selected	Nirmatrelvir/ritonavir in the high-risk patient within 5 days

Two of nine common respiratory viruses have a usable outpatient antiviral, and both only in selected patients. "There is no medicine that kills this virus, and here is what will make you feel better" is a complete and defensible consultation.

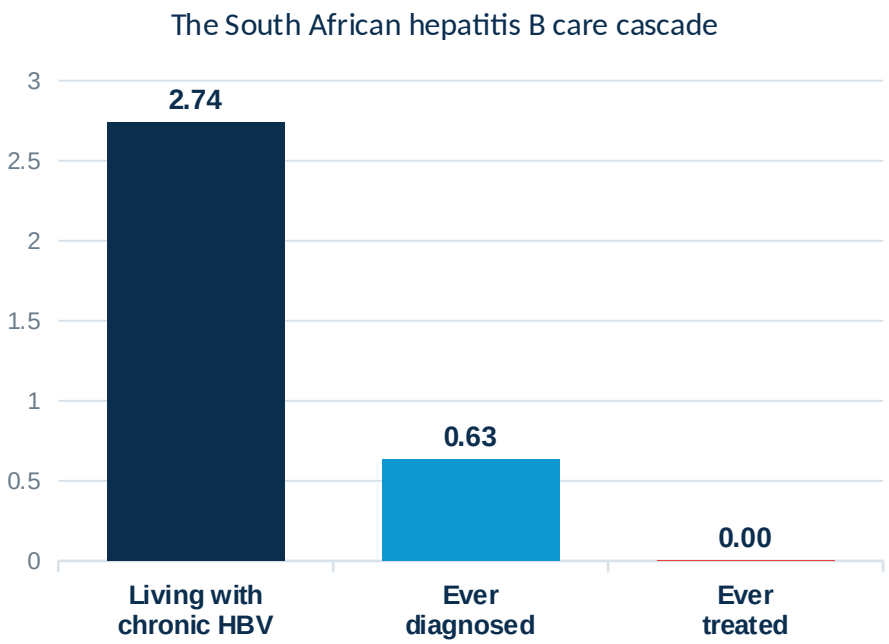
NICD respiratory pathogens surveillance; AAP/NICE bronchiolitis guidance; SAHPRA product registrations. RSV monoclonals and maternal RSV vaccine availability in South Africa remains limited — confirm locally.

PART FIVE

Viral hepatitis

You will rarely start hepatitis antivirals yourself. You are, however, the only person positioned to find these patients — and one specific omission in primary care can be fatal.

The GP's four jobs in chronic hepatitis B



Millions of people, 2022 estimates. About 23% of those infected have been diagnosed; roughly 0.1% have received treatment. HBsAg prevalence is around 5%.

1 — Screen

HBsAg in anyone born before universal infant vaccination, all people living with HIV, pregnant women, household and sexual contacts of a positive case, people who inject drugs, patients on dialysis, and anyone with unexplained abnormal liver enzymes.

2 — Interpret

Order HBsAg, anti-HBs and anti-HBc together. Interpreting these three correctly is a core GP skill — see the next slide.

3 — Vaccinate

Vaccinate every non-immune at-risk patient and every household contact. Check anti-HBs after the course in healthcare workers, dialysis patients and the immunocompromised.

4 — Refer for treatment decisions

Whether and when to start tenofovir or entecavir depends on ALT, HBV DNA, fibrosis stage and phase of infection. Refer — and never start or stop a nucleos(t)ide analogue on your own.

The treatment bar on that chart is almost invisible. Closing this gap is a primary-care function, not a specialist one — it begins with ordering HBsAg on the right patient.

SA NDoH National Guidelines for the Management of Viral Hepatitis, 2019; WHO Guidelines for chronic hepatitis B, 2024; Spearman CW. S Afr J Gastroenterol Hepatol 2024. Cascade data: CDA Foundation Polaris, 2022 estimates.

Reading hepatitis B serology in 30 seconds

Order all three together. HBsAg answers "are they infected now?", anti-HBc answers "have they ever been infected?", and anti-HBs answers "are they protected?". Almost every clinical question in primary care falls out of that triad.

HBsAg	anti-HBc	anti-HBs	Interpretation	What to do
neg	neg	neg	Susceptible — never infected and not immune	**Vaccinate if at risk**
neg	neg	pos	Immune through vaccination	No further action
neg	pos	pos	Immune through resolved natural infection	**No treatment — but see reactivation risk**
pos	pos	neg	Chronic hepatitis B if HBsAg persists ≥6 months	**Refer. ALT, HBV DNA, fibrosis staging, HCC surveillance**
neg	pos	neg	Isolated anti-HBc — resolved infection, false positive, or occult HBV	**Discuss. Test HBV DNA if immunosuppression is planned**

Add HBeAg and HBV DNA only when referring

These stage the infection and guide treatment. They rarely change what a GP does at the first visit — do not delay the referral waiting for them.

A raised ALT is not required

Many patients with significant chronic hepatitis B have normal transaminases. A normal ALT never excludes the diagnosis or the need for assessment.

Test the household

Screen and vaccinate sexual partners and household contacts of every HBsAg-positive patient. This is often the highest-yield thing you do that week.

The single most useful habit: whenever you order HBsAg, order anti-HBc and anti-HBs on the same form. A lone HBsAg result answers only a third of the question.

SA NDoH National Guidelines for the Management of Viral Hepatitis, 2019; WHO 2024; CDC interpretation of hepatitis B serological test results.

The omission that kills: HBV reactivation on immunosuppression

Reactivation of hepatitis B during immunosuppressive therapy can cause a severe hepatitis flare, acute liver failure and death. It is entirely preventable, and prevention starts with a blood test that a GP is often the person to order.

1. Before you refer or start

Screen HBsAg + anti-HBc (± anti-HBs) in every patient about to receive:

- rituximab or any anti-CD20 agent
- cytotoxic chemotherapy
- anti-TNF and other biologics
- prolonged or high-dose corticosteroids
- transplant immunosuppression

2. Stratify the risk

HBsAg positive — high risk, whatever the HBV DNA.

HBsAg negative but anti-HBc positive — still at risk, and the risk is substantial with anti-CD20 agents.

Both negative — vaccinate if at risk; no prophylaxis needed.

3. Act

Start antiviral prophylaxis (tenofovir or entecavir) before immunosuppression, in consultation with a specialist.

Continue for at least 6 months after completion — and for at least 12 months after anti-CD20 therapy.

Monitor ALT and HBV DNA.

The classic missed case A patient with resolved hepatitis B (HBsAg negative, anti-HBc positive) receives rituximab for lymphoma or a rheumatological condition. Nobody screened. Reactivation follows and can be fulminant.

Do not stop a nucleos(t)ide analogue casually Abrupt withdrawal of tenofovir or entecavir can precipitate a severe hepatitis flare. If a patient asks to stop, or runs out, that is a same-week specialist conversation.

Remember HBV in the HIV-positive patient Anyone with HIV and HBV co-infection must have tenofovir plus lamivudine or emtricitabine in their ART regimen. Switching ART without accounting for HBV can trigger a flare.

If you write one referral letter differently after today, make it this: state the patient's HBsAg and anti-HBc status when referring anyone for immunosuppressive therapy.

AASLD/IDSA Practice Guideline on treatment of chronic hepatitis B, 2025 update; WHO 2024; EASL Clinical Practice Guidelines on hepatitis B.

Hepatitis C is now curable — your job is to find it

Hepatitis C

Direct-acting antivirals cure more than 95% of patients in 8–12 weeks of oral therapy, with few side-effects and no interferon. This is one of the genuine triumphs of modern medicine — and the bottleneck in South Africa is diagnosis, not treatment.

- **Who to screen**
  - People who inject drugs, or who ever have; people living with HIV; recipients of blood products before screening was introduced; people with unexplained raised ALT; incarcerated populations; people who have had tattoos or medical procedures in unregulated settings; men who have sex with men with HIV.
- **How to test**
  - Anti-HCV antibody first. If reactive, HCV RNA (PCR) to confirm active infection — antibody alone cannot distinguish current from cleared infection.
- **Treatment**
  - Pangenotypic regimens such as sofosbuvir/velpatasvir have simplified therapy dramatically. Genotyping is no longer routinely required. Refer for initiation, and be aware of interactions with statins, amiodarone (contraindicated with sofosbuvir) and some anticonvulsants.
- **Cure is real**
  - Sustained virological response at 12 weeks after therapy equals cure. It reduces progression to cirrhosis, reduces hepatocellular carcinoma risk, and stops onward transmission.

Hepatitis A

Faecally transmitted, usually self-limiting. No antiviral. Supportive care, hygiene advice, notification. An effective vaccine is available privately and is worth offering to travellers, men who have sex with men, and people with chronic liver disease.

Hepatitis E

Increasingly recognised in South Africa. Usually self-limiting, but genotypes 1 and 2 carry high mortality in pregnancy, and genotypes 3 and 4 can become chronic in the immunosuppressed. No routine antiviral; ribavirin is a specialist option in chronic infection.

Hepatitis D

Only occurs with hepatitis B and accelerates progression to cirrhosis. Test anti-HDV in any HBsAg-positive patient with rapid progression. Bulevirtide is an emerging option — specialist territory.

Two questions added to a routine history — "have you ever injected drugs?" and "have you ever had a blood transfusion before the mid-1990s?" — find most of the undiagnosed hepatitis C in a general practice population.

SA NDoH National Guidelines for the Management of Viral Hepatitis, 2019; WHO hepatitis C guidelines; EASL recommendations on treatment of hepatitis C.

PART SIX

HIV: what belongs in general practice

Antiretroviral regimen construction is specialist work. Testing, prophylaxis and prevention are not — and in South Africa they are among the highest-value things a GP does.

PEP: a time-critical prescription you must be able to write

0–2 h Ideal	≤24 h Good	24–48 h Still worthwhile	48–72 h Last chance	>72 h Do not start

Time from exposure. PEP is an emergency: start it, then complete the paperwork.

Assess

- Was the exposure high risk? Percutaneous injury, mucous membrane or non-intact skin exposure, receptive or insertive unprotected sex, sexual assault, shared injecting equipment.
- Is the source known to be HIV positive, or of unknown status from a high-prevalence population?
- Rapid HIV test the exposed person — PEP is not given to someone already HIV positive.
- Assess for other exposures at the same time: hepatitis B, hepatitis C, other STIs, pregnancy risk.

Prescribe

- Standard adult regimen: tenofovir disoproxil fumarate with emtricitabine or lamivudine, plus dolutegravir.
- Duration: 28 days, complete course. Give the whole course, not a starter pack the patient may not return for.
- Baseline: HIV test, creatinine, HBsAg, plus pregnancy test where relevant.
- Counsel on adherence, nausea, and the need for barrier protection until confirmed negative.

Follow up

- Repeat HIV testing at 6 weeks and 3 months after exposure using a fourth-generation assay.
- Hepatitis B: if the exposed person is non-immune, give hepatitis B immunoglobulin and start the vaccine course.
- Provide emergency contraception and STI prophylaxis after sexual assault, plus psychosocial support and forensic referral.
- Transition to PrEP if the exposure risk is ongoing — do not simply stop at day 28.

Make sure every clinician and every after-hours locum in your practice knows where the PEP starter supply is kept and what the regimen is. Delay is the only modifiable failure in this pathway.

Southern African HIV Clinicians Society guidelines on post-exposure prophylaxis; SA NDoH ART Clinical Guidelines. Confirm the current national regimen and local protocol before prescribing.

PrEP in South Africa 2026: four ways to prevent HIV

The 2025 SAHCS guideline expanded eligibility substantially: PrEP should be offered to any HIV-negative person at risk of acquiring HIV — and to anyone who asks for it, independent of assessed risk.

Modality	How it is given	Who it suits	Status in South Africa
Oral TDF/FTC or TDF/3TC	One tablet daily. Event-driven "2-1-1" is an option for men who have sex with men.	Anyone able to take a daily tablet — the default option and by far the cheapest	Standard of care, public and private. Over 1.78 million initiated by end-2024
Dapivirine vaginal ring	Silicone ring inserted vaginally, replaced monthly	Women wanting a discreet, non-systemic, woman-controlled method	SAHPRA-approved 2022. Growing private access, limited public rollout
Cabotegravir long-acting	Intramuscular at month 0 and month 1, then every 2 months	People who struggle with daily adherence, or who want privacy	SAHPRA-approved 2022. Not on the EML; private access depends on cost
Lenacapavir (LEN)	Subcutaneous injection every 6 months, with an oral lead-in	Anyone for whom twice-yearly dosing is transformative	SAHPRA-approved 2025. Public rollout at 300+ high-incidence clinics from April 2026

Before starting

Confirm HIV negative with a recent test. Check creatinine and HBsAg — TDF is active against hepatitis B, and stopping it in an HBV-infected person can cause a flare.

While on PrEP

Repeat HIV testing every 3 months. Screen for STIs. Review adherence, and remind patients that PrEP does not protect against other STIs or pregnancy.

Stopping and restarting

PrEP is not a lifelong commitment. People may start, stop and restart as their circumstances change — say this explicitly, it improves uptake.

The safety pearl: check HBsAg before starting any tenofovir-containing PrEP. Tenofovir suppresses hepatitis B, and stopping PrEP in an undiagnosed HBV carrier can precipitate a flare.

Macdonald P, Nair G, Wattrus C et al. Southern African HIV Clinicians Society guideline on pre-exposure prophylaxis to prevent HIV. S Afr J HIV Med 2025;26(1):a1713; SA NDoH Lenacapavir Implementation Guidelines 2025.

Where the GP's scope ends and the specialist's begins

Firmly within GP scope

- Offering an HIV test at every appropriate opportunity — provider-initiated testing remains the single highest-yield act
- Same-day initiation of first-line ART in an uncomplicated adult (TDF/3TC/DTG), where you are trained and supported to do so
- Routine monitoring: viral load at 6 and 12 months, then annually; creatinine; weight, blood pressure and lipids on dolutegravir
- Recognising and managing common adverse effects: weight gain, insomnia, headache on dolutegravir; renal monitoring on tenofovir
- Screening for TB at every visit, and for cervical cancer, hypertension, diabetes and depression
- Adherence support, disclosure counselling, and partner testing
- **Reinforcing U = U: an undetectable viral load means HIV is not sexually transmitted.**

Refer or discuss with a specialist

- Virological failure — a viral load above 1000 copies/mL on two occasions despite documented adherence support
- Any need for genotypic resistance testing or a second- or third-line regimen
- Advanced disease: CD4 below 200, cryptococcal antigen positive, suspected TB meningitis, or suspected immune reconstitution inflammatory syndrome
- Pregnancy with complexity, and all paediatric and adolescent ART
- Significant drug–drug interactions, particularly with rifampicin-based TB therapy, anticonvulsants or oncology agents
- HIV with hepatitis B or C co-infection, where the ART regimen must account for both
- **When in doubt, phone. A five-minute call is faster than a failed regimen.**

Antiretrovirals are the one antiviral class where lifelong adherence, not the timing of the first dose, determines the outcome — the whole framework from part one is inverted.

SA NDoH ART Clinical Guidelines; Southern African HIV Clinicians Society adult ART guidelines.

PART SEVEN

Prescribing safely and prescribing well

Renal dosing, interactions, special populations, cost, and the discipline of not prescribing. This is where an antiviral consultation is won or lost.

Adverse effects, contraindications and monitoring

Agent	Common and expected	Serious but uncommon	Absolute cautions	Monitoring in primary care
Aciclovir Valaciclovir Famciclovir	Nausea, headache, malaise, diarrhoea	Neurotoxicity — confusion, hallucinations, myoclonus (elderly, renal impairment). Crystal nephropathy and acute kidney injury.	Renal impairment without dose adjustment; dehydration; concurrent nephrotoxins	Baseline creatinine before high-dose zoster regimens if ≥65 or renal disease. Push oral fluids.
Oseltamivir	Nausea and vomiting — take with food; headache	Rare neuropsychiatric events — confusion, abnormal behaviour, self-injury — mainly in children and adolescents.	CrCl <10 mL/min without specialist advice	Warn caregivers about behavioural change. Dose-reduce if CrCl <60.
Baloxavir	Well tolerated; diarrhoea, bronchitis	Emergence of reduced-susceptibility variants, particularly in the immunocompromised.	Pregnancy and postpartum; caution in immunocompromise	None routine. Separate from antacids, iron and calcium.
Nirmatrelvir/ ritonavir	Dysgeusia (metallic taste), diarrhoea, hypertension	Harm from drug–drug interactions — hepatotoxicity, rhabdomyolysis, bleeding, arrhythmia, adrenal suppression.	eGFR <30; severe hepatic impairment; contraindicated co-medication	Full medication reconciliation first. Reinstate held medicines at the right time.
Tenofovir DF (PrEP, PEP, HBV)	Nausea and flatulence early; usually settles	Renal tubulopathy and falling eGFR; reduced bone mineral density long term. Hepatitis B flare on abrupt withdrawal.	Pre-existing renal impairment; undiagnosed hepatitis B	Creatinine at baseline then periodically. HBsAg before starting.

The two commonest real-world harms from antivirals in primary care are aciclovir neurotoxicity in an elderly patient whose dose was never adjusted, and a ritonavir interaction that nobody checked.

Summaries of product characteristics for each agent; NICD Influenza guidelines 2026; nirmatrelvir/ritonavir prescribing information.

Renal adjustment: a table worth keeping on the desk

Aciclovir, valaciclovir and oseltamivir are all renally cleared. A standard dose in a patient with a creatinine clearance of 25 mL/min is a toxic dose — and in an 80-year-old, a "normal" creatinine can still mean a clearance below 40.

Drug and indication	CrCl >50 mL/min	CrCl 30–49	CrCl 10–29	CrCl <10
Valaciclovir — herpes zoster	**1 g three times daily**	1 g twice daily	1 g once daily	500 mg once daily
Valaciclovir — genital HSV episodic	**500 mg twice daily**	500 mg twice daily	500 mg once daily	500 mg once daily
Valaciclovir — HSV suppression	**500 mg once daily**	500 mg once daily	500 mg every 48 h	500 mg every 48 h
Aciclovir — herpes zoster	**800 mg five times daily**	800 mg five times daily	800 mg three times daily (CrCl 10–25)	800 mg twice daily
Aciclovir — genital HSV	**400 mg three times daily**	400 mg three times daily	400 mg three times daily	200 mg twice daily
Famciclovir — herpes zoster	**500 mg three times daily**	500 mg twice daily (CrCl 40–59)	500 mg once daily	250 mg after each dialysis
Oseltamivir — treatment	**75 mg twice daily (CrCl >60)**	30 mg twice daily (CrCl 30–60)	30 mg once daily	Specialist advice
Nirmatrelvir/ritonavir	**300/100 mg twice daily**	150/100 mg twice daily (eGFR 30–59)	Not recommended	Not recommended

Ask about the whole medicine list

Concurrent ACE inhibitors, ARBs, diuretics and NSAIDs magnify the risk of acute kidney injury during high-dose antiviral therapy.

Hydration is part of the prescription

Tell zoster patients explicitly to drink well. Crystal nephropathy is largely a disease of the dehydrated patient.

When in doubt, use the lower dose

Under-dosing an antiviral in an elderly patient is a smaller clinical problem than an admission with confusion and acute kidney injury.

Manufacturer prescribing information for each agent; NICD 2026. Estimate creatinine clearance with the Cockcroft–Gault equation. Where dialysis is involved, seek specialist advice.

Four groups where the usual answer changes

Pregnancy

- Influenza: pregnancy and the 6 weeks postpartum are a major risk group. Oseltamivir is used in pregnancy where indicated; baloxavir is not recommended.
- Inactivated influenza vaccine is safe at any stage and protects the infant for the first months of life — a South African RCT halved influenza illness in both mother and infant.
- HSV: aciclovir and valaciclovir are widely used. Suppression from 36 weeks reduces recurrence at delivery. A first episode in the third trimester needs obstetric input.
- Varicella in pregnancy is potentially serious — discuss urgently.
- Molnupiravir is contraindicated. Nirmatrelvir/ritonavir requires specialist discussion.

Children

- Almost all antiviral dosing in children is weight-based — check the band, do not extrapolate from the adult dose.
- Healthy children with chickenpox usually need no antiviral. Never give aspirin.
- Oseltamivir: warn caregivers about the rare neuropsychiatric reactions and advise them to stop and call if behaviour changes.
- Baloxavir is licensed from 5 years; nirmatrelvir/ritonavir from 12 years and ≥40 kg.
- Any neonate with vesicles, sepsis or seizures — admit for IV aciclovir. Do not treat as an outpatient.

Older adults

- Renal function declines with age even when creatinine looks normal — calculate creatinine clearance, do not eyeball it.
- Highest risk of aciclovir neurotoxicity, which is frequently mistaken for delirium of another cause.
- Highest absolute benefit from influenza and COVID-19 antivirals, and from zoster and influenza vaccination.
- Polypharmacy makes ritonavir-boosted therapy hazardous — this is the population where the interaction check matters most.
- Five-times-daily aciclovir is rarely taken correctly; prefer valaciclovir or famciclovir where affordable.

Immunocompromised

- The therapeutic window is longer — treat even late, because replication continues.
- Expect atypical, prolonged, severe and disseminated presentations, and a higher chance of antiviral resistance.
- Screen for hepatitis B before any immunosuppressive therapy — see the reactivation slide.
- Zoster is a referral, not a routine script, in significant immunosuppression.
- Live vaccines are contraindicated; the recombinant zoster vaccine is not live and can be given.

NICD 2026; SAHCS guidelines; RCOG/BASHH guidance on genital herpes in pregnancy; product labelling. Where a specific agent's safety in pregnancy is uncertain, discuss with obstetrics or a virologist.

What things cost, and what they are worth

Cost is a clinical variable in South Africa, not an administrative footnote. A patient who cannot afford the full course is worse off than one who was never prescribed it.

Intervention	Relative cost	Absolute benefit	Value judgement
Influenza vaccine, annual	R (free, public sector priority groups)	Roughly 50–70% fewer medically attended cases in a well-matched season	Outstanding — the single best buy in this deck
Generic aciclovir, zoster course	R	Faster rash healing, less acute pain, less shedding	Excellent value if started within 72 hours
Valaciclovir, zoster course	R R	Equal efficacy, three doses a day instead of five	Worth the premium when adherence is the limit
Oseltamivir, 5-day course	R R	About 1 day less symptoms; no effect on admission if low risk	Poor value in the well; justified if high risk
Baloxavir, single dose	R R R	About 1 day less symptoms; may reduce admission (low certainty)	Convenient; limited supply, higher cost
Nirmatrelvir/ritonavir, 5 days	R R R R	Meaningful reduction in progression if genuinely high risk	Good value in the right patient only
Recombinant zoster vaccine	R R R R R (≈ R5 566 + fees)	Around 90% efficacy, including in immunocompromised patients	Highly effective, out of reach for most
Oral PrEP (TDF/FTC)	R (free, public sector)	Very high protection against HIV with good adherence	Exceptional value; under-used

Ask the price question out loud. "This course will cost roughly X — is that manageable, or should we use the cheaper option?" is better medicine than a script the patient quietly does not fill.

Relative cost tiers are indicative for the private sector. Verify current Single Exit Price at medicineprices.org.za before quoting a figure to a patient. Neither oseltamivir nor baloxavir appears on the National Essential Medicines List.

Seven prescriptions not to write

Antiviral resistance is driven by the same forces as antibacterial resistance: repeated courses, subtherapeutic dosing, and prolonged exposure at high viral load. Stewardship is not rationing — it is accuracy.

Oseltamivir for uncomplicated influenza in a healthy adult	About one day of benefit, no reduction in admission, and a cost the patient carries. Offer symptomatic care and next season's vaccine instead.
Any antiviral for a common cold, sore throat or acute bronchitis	No agent exists for rhinovirus, seasonal coronaviruses, parainfluenza or hMPV. Naming the virus is more useful than naming a drug.
Aciclovir started on day five of a crusted zoster rash	The replication phase is over. Treat the pain properly, screen for complications, and discuss vaccination.
A repeat suppressive HSV script that has never been reviewed	Set an annual review. Recurrence frequency falls over time and many patients can safely stop.
Nirmatrelvir/ritonavir without a documented interaction check	This is the prescription most likely to cause serious harm. If you cannot check, do not prescribe.
Starting or stopping a hepatitis B nucleos(t)ide analogue independently	Withdrawal can precipitate a severe flare. Every change goes through a specialist.
A "just in case" antiviral to keep at home for undefined future symptoms	Except for a planned episodic HSV course with clear instructions, this drives resistance and inappropriate use.

Scripting the refusal: "I could give you that, but it would not help you and it might harm you. Here is what will help." Patients accept a clear explanation far more readily than most of us expect.

WHO Clinical practice guidelines for influenza 2024; NICD 2026; antimicrobial stewardship principles applied to antivirals.

When to refer, and when to phone a virologist

Admit today

- Suspected HSV encephalitis — start IV aciclovir before imaging
- Neonatal HSV or varicella; any vesicular rash with sepsis in a neonate
- Disseminated zoster, or zoster with neurological signs
- Eczema herpeticum
- Severe or complicated influenza — hypoxia, dyspnoea, LRTI signs, decompensating comorbidity
- Acute hepatitis with encephalopathy or coagulopathy

Same-day specialist opinion

- Herpes zoster ophthalmicus, or any zoster involving the eye
- Ramsay Hunt syndrome
- Zoster or varicella in significant immunosuppression
- Varicella in pregnancy, or significant exposure in a non-immune pregnant woman
- Suspected hepatitis B reactivation, or immunosuppression planned in an HBsAg- or anti-HBc-positive patient
- Occupational or sexual exposure requiring PEP, if you cannot start it yourself

Routine referral

- Newly diagnosed chronic hepatitis B or C, for staging and treatment decisions
- HIV virological failure, or any need for resistance testing
- Recurrent HSV failing suppressive therapy — consider resistance
- Post-herpetic neuralgia uncontrolled at 3 months
- Any patient whose antiviral requirement extends beyond a single defined course

Use the NICD Hotline — it is free, staffed 24 hours, and answered by a clinician

For clinical advice on any suspected viral infection, outbreak, unusual presentation or specimen query. Laboratory queries for respiratory pathogens go to the Centre for Respiratory Diseases and Meningitis. Your own referral laboratory's pathologist is also a phone call away — a five-minute discussion often prevents an unnecessary referral, or catches a necessary one.

NICD Hotline

0800 212 552

NICD Hotline for clinical support: 0800 212 552 (24 hours). NICD Centre for Respiratory Diseases and Meningitis: 011 386 6410.

PRINT THIS ONE

The consulting-room summary

Condition	Treat whom	Window	First-line adult regimen	Do not forget
Influenza	Severe or hospitalised illness; non-severe with major risk factors	**≤48 h**	**Oseltamivir 75 mg BD × 5 days**	Never delay for a test. Vaccinate before the season.
Herpes zoster	Anyone in the window; always if ≥50 y, severe pain, immunocompromised, non-truncal	**≤72 h**	**Valaciclovir 1 g TDS × 7 days**	Renal dose. Analgesia from day one. HIV test if <50. Eye = emergency.
Genital HSV — first episode	Every first episode	**Any time**	**Valaciclovir 1 g BD × 7–10 days**	Partner notification, HIV test, transmission counselling.
Genital HSV — recurrence	Only if it can start at prodrome	**≤24 h**	**Valaciclovir 500 mg BD × 3 days**	Give a course to keep at home. Suppress if ≥6 episodes a year.
Varicella	≥12 y, pregnancy, immunocompromised, chronic lung or skin disease	**≤24 h**	**Aciclovir 800 mg 5×/day × 7 days**	Healthy young children need nothing. No aspirin; avoid ibuprofen.
COVID-19	Non-hospitalised adults at high risk, not needing oxygen	**≤5 days**	**Nirmatrelvir/ritonavir 300/100 mg BD × 5 days**	Full interaction check every time. eGFR <30: do not use.
HIV exposure	Any significant occupational or sexual exposure	**≤72 h**	**TDF + FTC/3TC + dolutegravir × 28 days**	Baseline HIV, creatinine, HBsAg. Retest at 6 weeks and 3 months.
Chronic HBV or HCV	Do not initiate — find, stage and refer	—	**Specialist-directed**	Screen before any immunosuppression. Never stop a NUC abruptly.

Consolidated from NICD Influenza guidelines 2026, SA NDoH viral hepatitis guidelines 2019, SAHCS PrEP guideline 2025, and product prescribing information. Doses are for adults with normal renal function.

TAKE-HOME MESSAGES

Eight things worth remembering on Monday morning

1. Antivirals only work against a replicating virus. That single fact explains the window, the failure of late treatment, and why herpesviruses recur.
2. Timing is the intervention. Count hours from symptom or rash onset, and write the onset time in the notes.
3. Risk-stratify before you prescribe. The same drug is essential in one patient and near-worthless in another.
4. In influenza, the honest conversation about roughly one day of benefit is better medicine than a reflex script.
5. Zoster within 72 hours deserves treatment, aggressive analgesia, an HIV test under 50, and a renal-adjusted dose.
6. Nirmatrelvir/ritonavir is the antiviral most likely to harm your patient — through an interaction you did not check.
7. Screen for hepatitis B before anyone is immunosuppressed. It is the omission with the highest mortality in this deck.
8. The highest-value antiviral interventions in South Africa are preventive: influenza vaccine, hepatitis B vaccine, PrEP, and now the zoster vaccine.

Thank you

Questions, cases and disagreements are all welcome.

If you have a case you are unsure about — an unusual serology pattern, an antiviral you are not certain is indicated, or a specimen question — please phone the laboratory. That conversation is part of the service, and it is almost always faster than a referral.

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Sources and further reading (1 of 2)

South African national guidance

- National Institute for Communicable Diseases. Influenza: NICD recommendations for the diagnosis, management, prevention and public health response. Version 1.8, April 2026. Johannesburg: NICD; 2026.
- National Institute for Communicable Diseases. Influenza surveillance in South Africa, 2025. Johannesburg: NICD; 2025.
- National Department of Health, South Africa. National Guidelines for the Management of Viral Hepatitis. Pretoria: NDoH; 2019.
- National Department of Health, South Africa. Lenacapavir Implementation Guidelines. Pretoria: NDoH; 2025.
- National Department of Health, South Africa. ART Clinical Guidelines for the Management of HIV in Adults, Pregnancy and Breastfeeding, Adolescents, Children, Infants and Neonates.
- South African Health Products Regulatory Authority. Registration of Paxlovid (nirmatrelvir/ritonavir), 30 January 2023; registration of Shingrix (recombinant zoster vaccine), June 2026.

Southern African society guidance, epidemiology and burden

- Macdonald P, Nair G, Wattrus C, et al. Southern African HIV Clinicians Society guideline on pre-exposure prophylaxis to prevent HIV. S Afr J HIV Med. 2025;26(1):a1713.
- Southern African HIV Clinicians Society. Guidelines for post-exposure prophylaxis following occupational and non-occupational exposure to HIV.
- Spearman CW. Demystifying the management of hepatitis B — the WHO 2024 guidelines on the management of hepatitis B. S Afr J Gastroenterol Hepatol. 2024;2(1).
- Tempia S, Walaza S, Moyes J, et al. Quantifying how different clinical presentations, levels of severity, and healthcare attendance shape the burden of influenza-associated illness: a modeling study from South Africa. Clin Infect Dis. 2019;69:1036–48.
- Madhi SA, Cutland CL, Kuwanda L, et al. Influenza vaccination of pregnant women and protection of their infants. N Engl J Med. 2014;371:918–31.
- CDA Foundation. Polaris Observatory: hepatitis B and C country profile, South Africa. 2022 estimates.

Sources and further reading (2 of 2)

International guidance

- World Health Organization. Clinical practice guidelines for influenza. Geneva: WHO; 2024.
- World Health Organization. Guidelines for the prevention, diagnosis, care and treatment for people with chronic hepatitis B infection. Geneva: WHO; 2024.
- Ghany MG, Pan CQ, Lok AS, et al. AASLD/IDSA practice guideline on treatment of chronic hepatitis B. Hepatology. 2025 (2025 update).
- National Institutes of Health. COVID-19 Treatment Guidelines: ritonavir-boosted nirmatrelvir (Paxlovid).
- Centers for Disease Control and Prevention. Sexually Transmitted Infections Treatment Guidelines — genital herpes.
- University of Liverpool. COVID-19 Drug Interactions checker. Available at covid19-druginteractions.org.

Primary literature and reviews

- Gao Y, Zhao Y, Liu M, et al. Antiviral medications for treatment of nonsevere influenza: a systematic review and network meta-analysis. JAMA Intern Med. 2025;185:293–301.
- Gao Y, Guyatt G, Uyeki TM, et al. Antivirals for treatment of severe influenza: a systematic review and network meta-analysis of randomised controlled trials. Lancet. 2024;404:753–63.
- Corey L, Wald A, Patel R, et al. Once-daily valacyclovir to reduce the risk of transmission of genital herpes. N Engl J Med. 2004;350:11–20.
- Dworkin RH, Johnson RW, Breuer J, et al. Recommendations for the management of herpes zoster. Clin Infect Dis. 2007;44(Suppl 1):S1–26.
- De Clercq E, Li G. Approved antiviral drugs over the past 50 years. Clin Microbiol Rev. 2016;29:695–747.
- Burrell CJ, Howard CR, Murphy FA, editors. Fenner and White's Medical Virology. 5th ed. London: Academic Press; 2017.

Prepared July 2026. Guidelines, product availability and prices change — verify current national guidance before prescribing.