

NGN NCLEX 2026 • VISUAL STUDY LIBRARY

Influenza

Nursing Care, Priorities & Teaching

Acute viral respiratory infection — sudden onset, high fever, severe myalgia. High yield for prioritization, droplet precautions, antiviral timing, and Reye's syndrome safety.

RESPIRATORY • INFECTIOUS DISEASE

HIGH PRIORITY

COMMUNICABLE DISEASE CLUSTER

SOURCE TRANSPARENCY

This topic is *not present* in Diane's uploaded reference notes. Content compiled from external authoritative sources:

SAUNDERS COMPREHENSIVE REVIEW FOR THE NCLEX-RN (2026)

,
ATI RN ADULT MEDICAL-SURGICAL NURSING

,
CDC INFLUENZA CLINICAL GUIDANCE (2025-2026)

,
ACIP RECOMMENDATIONS

, and

LIPPINCOTT ILLUSTRATED REVIEWS: PHARMACOLOGY

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S 01 • DEFINITION & OVERVIEW

What Is Influenza?

- ▶ **Acute viral respiratory illness** caused by influenza viruses (RNA orthomyxoviruses). Highly contagious — spreads via large respiratory droplets, contact, and contaminated surfaces.
- ▶ **Three types matter:** Type A (most severe, pandemic potential, infects humans + animals), Type B (seasonal epidemics, milder), Type C (mild, sporadic).
- ▶ **Why it matters:** Annual cause of significant morbidity and mortality, especially in older adults, infants, pregnant patients, and the immunocompromised. Leading preventable cause of pneumonia hospitalization in the U.S.
- ▶ **Incubation:** 1–4 days • **Contagious period:** 1 day before symptoms through 5–7 days after onset (longer in children & immunocompromised).

RNA virus

Droplet spread

Seasonal: Oct-May

Antigenic drift & shift

Type A = pandemic risk

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S 02 • PATHOPHYSIOLOGY (SIMPLIFIED)

How the Virus Causes Illness

1 Entry: Virus inhaled in respiratory droplets → lands on respiratory epithelium of upper/lower airway.



2 Attachment: Viral *hemagglutinin (HA)* binds sialic-acid receptors on epithelial cells.



3 Replication: Virus enters cell, hijacks machinery, produces new viral particles → cell death (ciliated cell destruction).



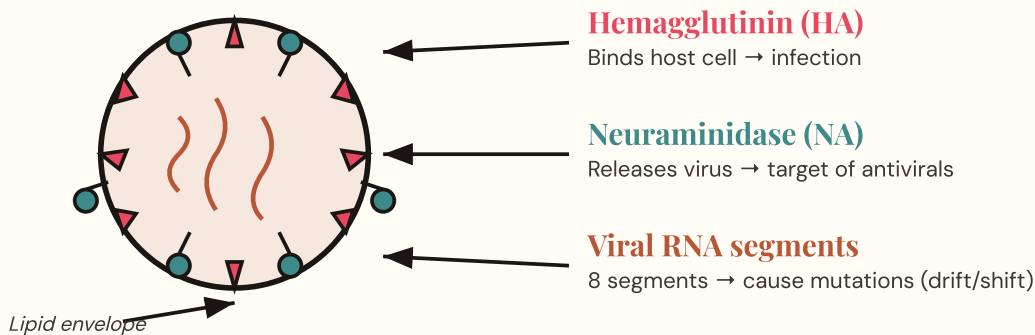
4 Spread: Viral *neuraminidase (NA)* cleaves bonds → releases new virions to infect more cells. (*This is the target of Tamiflu / Relenza.*)



5 Inflammatory cascade: Cytokine release (IL-1, IL-6, TNF- α) → fever, myalgia, fatigue. Damaged epithelium → loss of mucociliary clearance.



6 Complications: Damaged airway is vulnerable to *secondary bacterial pneumonia* (*S. pneumoniae*, *S. aureus*, *H. influenzae*) — the most common cause of flu-related death.



INFLUENZA VIRION STRUCTURE • HA AND NA PROTEINS DRIVE INFECTION & TREATMENT

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S 03 • SIGNS & SYMPTOMS

Classic Onset Is *Sudden* — Cold Creeps, Flu Hits Like a Truck

► EARLY / CLASSIC PRESENTATION

- **Sudden** high fever (100°F–104°F / 38°C–40°C)
- Shaking chills, rigors
- **Severe myalgia** (deep muscle aches — hallmark)
- Headache (often retro-orbital)
- Profound fatigue / malaise
- Dry, non-productive cough
- Sore throat, rhinitis, nasal congestion
- Anorexia

► LATE / COMPLICATIONS

- **Secondary bacterial pneumonia** (#1 killer):
productive cough returning after improvement,
recurring fever
- Dyspnea, hypoxia, ↓ SpO₂
- Pleuritic chest pain
- Confusion, altered LOC (esp. elderly)
- Dehydration
- Myocarditis, pericarditis
- Encephalitis (rare but serious)
- **Reye's syndrome** in children given aspirin

🚩 RED FLAG FINDINGS — NOTIFY PROVIDER IMMEDIATELY

Dyspnea or chest pain · SpO₂ < 92% on room air · Persistent fever > 3 days or fever that resolves then returns (sign of bacterial superinfection) · Confusion / lethargy · Severe dehydration · Inability to keep fluids down · Bluish lips/face · Worsening of chronic medical conditions

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§ 04 • PRIORITY NURSING INTERVENTIONS

ABC + Safety First

- ▶ **A — Airway:** Assess work of breathing, auscultate breath sounds (listen for crackles → pneumonia). Position semi-Fowler's to ease respirations.
- ▶ **B — Breathing:** Monitor SpO₂ continuously if < 95%. Administer humidified O₂ as ordered. Encourage deep breathing & incentive spirometry to prevent atelectasis.
- ▶ **C — Circulation:** Monitor vital signs q4h (more often if febrile or unstable). Watch for tachycardia, hypotension (sepsis).
- ▶ **Isolation:** Place on *droplet precautions* — surgical mask within 6 ft, private room when possible, mask on patient during transport.
- ▶ **Antipyretics:** Acetaminophen for fever/myalgia. **NEVER aspirin in children/teens < 19 — Reye's syndrome.**
- ▶ **Hydration:** Encourage 2–3 L oral fluids/day unless contraindicated. IV fluids if dehydrated.
- ▶ **Antiviral therapy:** Administer within **48 hours** of symptom onset for maximum benefit.
- ▶ **Rest & nutrition:** Cluster care, promote rest, offer small frequent meals/clear liquids.
- ▶ **Hand hygiene:** Before/after every patient contact. Teach patient cough etiquette.
- ▶ **Monitor for complications:** Increasing fever, productive cough, ↓ SpO₂ → pneumonia. Notify provider immediately.

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§ 08 • MEMORY BOOSTERS & MNEMONICS

Lock It Into Long-Term Memory

F · A · C · T · S — Flu Hallmarks

- F**ever (sudden, high)
- A**ches (severe myalgia)
- C**hills + Cough (dry)
- T**iredness (profound fatigue)
- S**ore throat / Sudden onset

"Cold Creeps · Flu Hits Like a Truck"

Cold = gradual onset, low/no fever, sneezing.
Flu = **SUDDEN** onset, high fever, body aches that "knock you flat."

The "48-Hour Window"

Tami-FLU for the **FLU** — must give within **48 hours** of symptom onset to work. After 48 hr → mostly supportive care.

Reye's Rule

Reye's = aspiRin + viRal illness + child = bRain swelling + liveR failure. *A/ways* use acetaminophen in pediatric flu.

Vaccine Timing: "2 Weeks to Work"

Annual flu vaccine takes ~**2 weeks** to build full immunity. Get it in **September–October** before peak season.

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S 05 • PHARMACOLOGY

Antivirals, Antipyretics & Vaccines

DRUG / CLASS	MECHANISM & USE	NURSING CONSIDERATIONS
Oseltamivir (Tamiflu) <i>Neuraminidase inhibitor · PO</i>	Blocks NA → prevents viral release. Shortens illness 1–2 days & reduces complications. Also used for prophylaxis after exposure.	Give within 48 hr of symptom onset. 5-day course. SE: nausea, vomiting (take with food), rare neuropsychiatric effects in adolescents — monitor mood/behavior.
Zanamivir (Relenza) <i>Neuraminidase inhibitor · Inhaled</i>	Same mechanism as oseltamivir, delivered by oral inhaler (Diskhaler).	Contraindicated in asthma/COPD — risk of bronchospasm. Have bronchodilator ready. Give bronchodilator <i>before</i> zanamivir if both ordered.
Baloxavir (Xofluza) <i>Cap-dep. endonuclease inhibitor · PO</i>	Blocks viral mRNA synthesis. Single oral dose — ↑ adherence.	Within 48 hr of onset. Avoid dairy/calcium-fortified products around dose (↓ absorption). Approved age ≥ 5.
Peramivir (Rapivab) <i>Neuraminidase inhibitor · IV</i>	Single IV dose for hospitalized or NPO patients unable to take PO/inhaled antivirals.	15–30 min infusion. Monitor for skin reactions (rare SJS/TEN). Adjust dose for renal impairment.
Acetaminophen (Tylenol) <i>Antipyretic / analgesic · PO</i>	Reduces fever and myalgia. First-line in children and adults.	Max 3–4 g/day (adults). Watch hepatotoxicity. NEVER substitute aspirin in patients < 19 — Reye's syndrome.
IIV (Inactivated Vaccine) <i>IM injection · annual</i>	Killed virus; stimulates antibody production. Approved age ≥ 6 months. High-dose & adjuvanted formulations for adults ≥ 65.	Mild soreness, low-grade fever ok. Severe egg allergy → recombinant (Flublok) or cell-based (Flucelvax). Takes 2 weeks for immunity.
LAIV (FluMist) <i>Live attenuated · intranasal</i>	Live weakened virus delivered as nasal spray. Ages 2–49 only.	Contraindicated: pregnancy, immunocompromised, children on aspirin, severe asthma, age < 2 or > 49. Avoid close contact with severely immunocompromised x 7 days.

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S 06 • NCLEX TEST TRAPS

Where Students Get Burned

X "Give aspirin to a 7-year-old with flu and fever."

✓ Give acetaminophen. Aspirin in viral illness + child = Reye's syndrome (encephalopathy + hepatic failure). Hard stop.

X "Place the influenza patient on airborne precautions in a negative pressure room."

✓ Flu is spread by droplet, not airborne. Surgical mask within 6 ft is correct. (TB & varicella = airborne; flu = droplet.)

X "Start oseltamivir on day 5 of symptoms for full benefit."

✓ Antivirals work best within 48 hours of symptom onset. After that, primarily supportive care (still indicated in high-risk hospitalized patients).

X "Give LAIV (FluMist) to a pregnant patient or immunocompromised client."

✓ LAIV is a live vaccine — contraindicated in pregnancy, immunocompromised, age < 2 or > 49, severe asthma, children on aspirin. Use IIV (inactivated injection) instead.

X "Antibiotics will treat the flu."

✓ Flu is viral. Antibiotics treat only secondary bacterial complications (pneumonia). Teach patients this to prevent misuse/resistance.

X "The flu shot can give you the flu."

✓ IIV is inactivated — cannot cause infection. Mild soreness or low-grade fever is an immune response, not the flu. Educate patients firmly.

X "Return to work the day fever breaks if you feel better."

✓ Stay home until 24 hours afebrile WITHOUT antipyretics. Contagious 1 day before symptoms through 5–7 days after onset.

✗ "Sudden onset of fever, body aches, and headache — must be a cold."

✓ Sudden onset + high fever + severe myalgia = FLU. Cold = gradual onset, sneezing, low/no fever, no body aches.

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S 07 • PATIENT & FAMILY EDUCATION

What to Teach Before Discharge

► PREVENTION

- Get **annual flu vaccine** — best in Sept–Oct
- Vaccine takes 2 weeks to build immunity
- Hand hygiene with soap & water ≥ 20 sec; alcohol-based rub when unavailable
- Cover cough/sneeze with elbow or tissue, then discard
- Avoid touching eyes, nose, mouth
- Avoid crowds & close contact during flu season if high-risk
- Disinfect high-touch surfaces (doorknobs, phones)
- High-risk groups: age < 5 or > 65 , pregnant, chronic illness (asthma, COPD, DM, heart, kidney), immunocompromised, BMI ≥ 40

► HOME CARE WHEN SICK

- Stay home — **24 hr afebrile without antipyretics** before returning to work/school
- Rest, hydrate (water, clear broths, electrolyte drinks)
- Acetaminophen for fever/aches; **never aspirin if < 19**
- Humidified air, throat lozenges, saline nasal spray
- Take full antiviral course exactly as prescribed
- Avoid contact with high-risk household members
- Wear a mask if you must be around others
- Designate one caregiver to limit household spread

🚨 SEEK EMERGENCY CARE IMMEDIATELY IF...

Difficulty breathing / shortness of breath · Persistent chest or abdominal pain · Persistent dizziness, confusion, inability to arouse · Seizures · Not urinating · Severe muscle pain · Severe weakness · Fever or cough that improves then returns or worsens · Worsening of chronic conditions · In children: bluish lips, fast/labored breathing, no tears when crying, dehydration, fever in infants < 12 weeks.

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S 09 • NCJMM CLINICAL JUDGMENT SCENARIO

Six-Step Next-Generation NCLEX Case

Scenario: A 72-year-old client with a history of COPD and Type 2 diabetes presents to the urgent care clinic in February. She reports the sudden onset of fever (101.8°F), severe body aches, chills, headache, and a dry cough that began **30 hours ago**. She lives with her 6-year-old grandson, who has been recently diagnosed with seasonal influenza. Vital signs: T 101.8°F, HR 108, RR 22, BP 132/78, SpO₂ 93% on room air. Lung auscultation: scattered wheezes bilaterally. She has not received her annual flu vaccine this year.

STEP 1 • RECOGNIZE CUES

What Matters Most?

Relevant cues: Sudden onset (< 48 hr), high fever, severe myalgia, dry cough, household flu exposure, age > 65, COPD, DM, unvaccinated, SpO₂ 93%, wheezes, HR 108, RR 22.

Pattern: Classic influenza presentation in a high-risk older adult with respiratory compromise.

STEP 2 • ANALYZE CUES

What Do They Mean?

Sudden onset + high fever + myalgia + exposure → **influenza**. SpO₂ 93% + wheezing + COPD → early respiratory compromise; **high risk for bacterial pneumonia**. Symptom onset 30 hr ago → still within antiviral window. Age > 65 + comorbidities → CDC high-risk category for severe outcomes.

STEP 3 • PRIORITIZE HYPOTHESES

What's Most Likely & Most Dangerous?

1. Influenza A or B (most likely) — confirm with rapid flu test/PCR.

2. COPD exacerbation triggered by viral infection — wheezes, ↓ SpO₂.

3. Pending bacterial pneumonia — high risk, monitor closely.

Less likely: COVID-19 (test as well), RSV.

STEP 4 • GENERATE SOLUTIONS

What Actions Could Help?

Isolate (droplet precautions, mask). Obtain rapid flu/COVID/RSV panel. Initiate **oseltamivir within 48 hr window**. Supplemental humidified O₂ to keep SpO₂ ≥ 92%. Bronchodilator nebulizer for wheezing. Acetaminophen for fever (avoid aspirin warning irrelevant — adult). Encourage fluids. Chest X-ray to rule out pneumonia. Notify provider.

STEP 5 • TAKE ACTION

Implement Priorities (ABC Order)

A/B: Apply mask, place on droplet precautions, administer O₂ 2 L NC (humidified, low-flow for COPD), elevate HOB. Albuterol nebulizer per protocol.

C: Continuous SpO₂, recheck VS q15 min until stable.

Meds: Oseltamivir 75 mg PO BID × 5 days, acetaminophen 650 mg PO. Push PO fluids.

Tests: Rapid flu/COVID swab, CXR, CBC.

STEP 6 • EVALUATE OUTCOMES

Did It Work?

Expected within 24–48 hr: SpO₂ ≥ 95%, RR < 20, HR < 100, fever down-trending, wheezes resolving, no productive cough. **Concerning trends → escalate:** SpO₂ < 92%, productive purulent sputum, worsening dyspnea, fever rebounds → suspect bacterial pneumonia → admit, add antibiotic per provider. **Discharge teaching:** complete antiviral course, isolate from grandson, vaccine for next season, return precautions.

Diane's NGN NCLEX 2026 Visual Study Library

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