Infection control and isolation

Standard and transmission-based precautions, hand hygiene, PPE order, sterile technique

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1 AT A GLANCE

Standard precautions are the minimum for every client, in every setting. Transmission-based precautions sit on top of them, never instead.

Contact, droplet or airborne

	Contact	Droplet	Airborne
Spreads by	Touch: directly, or on surfaces and equipment	Large droplets from coughing, sneezing or talking; they fall within a few feet	Tiny particles that stay in the air and travel farther
★ **Room**	Single room if possible; or cohort the same organism; or beds more than 3 feet apart, curtain drawn	Single room if possible; or more than 3 feet apart, curtain drawn	**Airborne infection isolation room**: negative pressure to nearby areas, the right air exchanges, safe exhaust or HEPA filters. Door closed
★ **You wear**	Gown and gloves: on as you enter, off before you leave	Mask, on as you enter	**Fit-tested N95 or higher-level respirator.** A surgical mask isn't enough
★ **Examples**	C. difficile, norovirus, MRSA and other resistant organisms, RSV, scabies, lice	Influenza, pertussis, mumps, meningococcal disease	Tuberculosis, measles, chickenpox
How long	By the organism's guidance: norovirus, 48 hours after symptoms end	Meningococcal: 24 hours of effective therapy. Pertussis: 5 days of effective antibiotics	Confirmed TB: until the client improves on effective treatment and has 3 consecutive negative sputum smears, on separate days

Plus standard precautions: Add eye and splash protection as standard precautions require, plus what the germ or procedure requires.

Chickenpox and shingles

Client	Precautions
Chickenpox, or widespread shingles	Airborne **plus contact**, until lesions crust
Localized shingles, immunocompromised client	Airborne plus contact, **until spread is ruled out**
Localized shingles, healthy immune system	**Standard precautions**, with all lesions covered until dry and crusted

Staffing: Staff who aren't immune to measles or chickenpox shouldn't care for those clients if immune staff are available.

Which hand hygiene?

Situation	Use
Hands look clean	**Alcohol rub**: kills germs better, easier on the skin
Visibly soiled (blood, body fluids); before eating; after the restroom	**Soap and water**
★ **C. difficile or norovirus**	CDC: rub still preferred unless soiled. Many agencies require soap and water in outbreaks. **Exam: soap and water**
Technique	Rub until dry, about 20 seconds; scrub with soap at least 20 seconds. Most missed: thumbs, fingertips, between fingers

When: Before client contact or a clean task, dirty to clean site, after contact or body fluids, right after removing gloves. **Gloves never replace hand hygiene.**

Putting on and taking off PPE

	Order	Get it right
Put on	Hand hygiene → gown → mask or respirator → goggles or face shield → **gloves last**, over the gown's cuffs	Gown covers neck to knees, arms to wrists. Mask band shaped to the nose, snug under the chin. Fit-check a respirator every time
★ **Remove**	**Gloves first** → goggles or face shield → gown → mask or respirator → hand hygiene	The outsides are dirty. Goggles by the strap; gown touching only the inside, rolled away; mask by the ties, without touching the front
Where	Everything off at the doorway, **except a respirator**	The respirator comes off after you leave and close the door

Follow policy: Dirtiest items first, mask last, because it sits on your face. Clean your hands between steps if they get contaminated. Agencies may teach another safe order, like gown and gloves together.

Chain of infection: break any link and it stops

	Infectious agent	Reservoir	Portal of exit	Mode of transmission	Portal of entry	Susceptible host
Break	Treat the infection	Clean and disinfect	Cover coughs; dress wounds	**Hand hygiene**: germs travel most often on hands	Aseptic technique	Rest, nutrition, oral care, daily bathing

Educational use only. Not a substitute for clinical judgment, your facility's policy or the provider's orders. Where practice varies, follow facility policy and state law. No patient information.

Infection control and isolation

1 AT A GLANCE, CONTINUED

Standard precautions: every client

- Gloves for expected contact with blood, body fluids, mucous membranes or broken skin. Never one pair for two clients; change from a dirty site to a clean one.
- Gown if your clothes could be soiled: off before you leave the room, never reused.
- Splashes or sprays likely? **Protect your eyes, nose and mouth.**
- Used needles aren't recapped, bent or removed: safety device, then straight into the sharps container. Recapping unavoidable? One-handed scoop or a device.
- One needle, one syringe, one client. Single-dose vials: one client only.
- Coughing clients and visitors get a mask; at least 3 feet of space when respiratory infections are going around.

Sterile technique

- Only sterile items on a sterile field. Check packages for moisture, tears, the expiry date and the indicator.
- The outer inch, and anything below the table edge, counts as contaminated.
- Keep sterile items between waist and shoulders, in sight. Turn away and the field is no longer sterile.
- First flap away from you, last toward you, so you never reach over the field.
- Drop items from about 6 inches; pour from the side. Moisture wicks germs through.
- ★ **In doubt, it's contaminated.** Discard the field and set up a new one.

2 PRIORITY AND SAFETY CALLS

★ Start precautions when you **suspect** the infection. Don't wait for the lab to confirm it.

★ Airborne: keep the door **closed** except to go in and out. A client with TB never shares a room: airborne isolation room, or transfer to a facility that has one.

Clients leave the room only when medically necessary. On droplet or airborne precautions, the client wears a **surgical mask**, lesions are covered, and you tell the receiving department first.

Contact: use the client's own equipment, like a stethoscope and blood pressure cuff. Shared equipment is cleaned and disinfected before the next client.

Not enough single rooms? Contact precautions: first to drainage that can't be contained, or stool incontinence.

Nursing homes: enhanced barrier precautions for a resistant organism, a wound or an indwelling device like a catheter, when contact precautions don't otherwise apply. Gown and gloves only for high-contact care; no room restriction. A resistant organism with uncontained drainage or acute diarrhea needs contact precautions.

Isolation never means less care: visit, check in, keep the call light in reach. Explain why it's needed and how long it may last.

3 EXAM ANCHORS

1. Contact: gown and gloves. Droplet: a mask. Airborne: a negative-pressure isolation room and a fit-tested N95 or higher respirator.
2. Traps: a surgical mask for TB, an open door on airborne precautions, and taking a respirator off in the room.
3. Removing PPE, gloves come off first: they're the most contaminated.
4. Clients with the same organism can share a room (cohorting). Draining MRSA shouldn't room with an immunocompromised client.
5. Gloves don't replace hand hygiene. With C. difficile on the exam, choose soap and water.
6. Probably sterile isn't sterile: in doubt, discard the field and start again.
7. Localized shingles in a healthy host: standard precautions, with all lesions covered until dry and crusted.

4 SELF-QUIZ

1. TB, measles and chickenpox need _____ precautions.
2. An airborne isolation room is at _____ pressure to the areas around it.
3. Pertussis needs droplet precautions until _____ days of effective antibiotics.
4. Taking off PPE, the _____ come off first.
5. Hands visibly soiled with blood need _____.
6. Rooming clients with the same organism together is called _____.

ANSWER KEY 1. airborne · 2. negative · 3. 5 · 4. gloves · 5. soap and water · 6. cohorting

5 SOURCES

1. CDC/HICPAC, Guideline for Isolation Precautions (full guideline, PDF). cdc.gov/infection-control/media/pdfs/Guidel…
2. CDC/HICPAC, 2007 Guideline for Isolation Precautions, Appendix A: Type and Duration of Precautions. cdc.gov/infection-control/hcp/isolation-pre…
3. CDC, Sequence for Putting On and Removing PPE. cdc.gov/hai/pdfs/ppe/ppe-sequence.pdf
4. CDC, Hand Hygiene for Healthcare Workers. cdc.gov/clean-hands/hcp/clinical-safety/ind…
5. CDC, Standard Precautions for All Patient Care. cdc.gov/infection-control/hcp/basics/standa…
6. CDC, Implementation of PPE in Nursing Homes (Enhanced Barrier Precautions). cdc.gov/long-term-care-facilities/hcp/preve…
7. Open RN, Nursing Skills 2e, 4.4 Sterile Fields. wtcs.pressbooks.pub/nursingskills/chapter/4-4-sterile-f…

Built from RN PocketPal course lessons: Standard precautions, hand hygiene and asepsis (c02-l01); Transmission-based precautions and PPE (c02-l02). Every line on this sheet comes from those lesson scripts.

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