

Philadelphia Department of Public Health

Division of Disease Control

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Health Advisory

FIFA Club World Cup 2025 – Public Health Preparedness Recommendations
June 9, 2025

SUMMARY POINTS

- Healthcare facilities should review their emergency response and disaster preparedness plans before the upcoming FIFA Club World Cup events.
- There may be more travelers than usual in the city. Consider travel related infections when people present for care.
- Clinicians should report conditions requiring immediate notification to PDPH, including any outbreaks, unusual presentations, or clusters of disease.

The City of Philadelphia is preparing to host a series of FIFA Club World Cup games from June 16, 2025 through July 4, 2025. While the City has received no information regarding any threats specific to these events, healthcare facilities should be prepared for both naturally occurring events that might result in increased illness, as well as the possibility of terrorism resulting in civilian casualties. The Philadelphia Department of Public Health (PDPH) recommends healthcare facilities review their emergency response and disaster preparedness plans before the upcoming FIFA events. Specific recommendations include:

- Evaluate facilities and personnel to ensure the safety and security of both.
- Ensure appropriate staff understand their roles in an emergency and communications protocols.
- Update clinical providers on biological, chemical, and radiological agents.
 - Information on these threats is available online at https://hip.phila.gov.
- Review procedures that address medical treatment of mass casualties, including decontamination, personal protective equipment (PPE) use, and triage protocols.
- Review procedures that address medical treatment for blast and bombing injuries.
- · Remind clinicians to ask about travel history.
- Prepare to treat individuals suffering from heat-related illness.

Disease Reporting

Due to an increase in both national and international travelers, importation of non-endemic and other communicable diseases and increased healthcare utilization may occur. PDPH reviews data daily from multiple sources to facilitate the recognition of disease outbreaks; however, PDPH relies on clinicians to report, **by telephone**, conditions that require immediate notification, including any outbreaks, unusual presentations, suspected high-consequence infections, or clusters of disease. Indicators of naturally occurring outbreaks or possible biological terrorism are:

- An unusual temporal or geographic clustering of illness (e.g., people who attended the same public event or gathering).
- Increase in serious lower respiratory illness with negative tests for common bacteria and viruses.
- Patients presenting with clinical signs and symptoms that suggest an infectious disease outbreak (e.g., >2 persons presenting with an unexplained febrile illness associated with sepsis, pneumonia, respiratory failure, rash, or botulism-like syndrome with flaccid muscle paralysis, especially if occurring in otherwise healthy persons).
- An unusual age distribution for common diseases (e.g., an increase in chickenpox-like illness in adult patients).



- Single cases of disease due to uncommon, non-indigenous agents (e.g., anthrax, plague, tularemia) in patients with no history suggesting an explanation for illness.
- Large number of cases of acute flaccid paralysis with prominent bulbar palsies, suggestive of a release of *botulinum* toxin.

Report conditions that require immediate notification to PDPH by calling 215-685-6741 during normal business hours (Monday-Friday, 8:30AM-5:00PM). Call 215-686-4514 (press 1 for Unified Dispatch and ask for the Division of Disease Control On-Call Staff) after hours as well as on weekends and holidays. PDPH will provide public health consultation and facilitate diagnostic testing that requires public health laboratory services. A list of reportable conditions and a fillable reporting form are available at https://hip.phila.gov/ReportDisease.

Screening Tools

PDPH has developed several patient screening tools to guide clinicians through the identification and appropriate work-up for communicable diseases and other threats. These tools are attached to this health advisory and include:

- Diseases of Concern by Country
- Public Health Screening Tool for High Consequence Pathogens
- Summaries of Biological, Chemical, and Radiological Threats
 - o Biological
 - o Chemical
 - o Radiological

Infectious Diseases of Concern by Travel History



Club Teams	Country	Diseases of Concern	Sources
CR Flamengo (FLA)	Brazil	Dengue*	Brazil CDC Yellow Book 2024
		Oropouche*	Brazil - Traveler view Travelers' Health CDC
		Yellow Fever*	
		Measles*	
		Malaria	
		Zika	
		Chikungunya	
		Tuberculosis	
		American trypanosomiasis (Chagas disease)	
		Hantavirus	
		Leishmaniasis	
		Leptospirosis	
		Schistosomiasis	
Esperance Sportive de Tunisie	Tunisia	Measles*	Tunisia - Traveler view Travelers' Health CDC
(EST)		Typhoid	
		Tuberculosis	
		Tick-borne encephalitis	
		Chikungunya	
		Leishmaniasis	
		Leptospirosis	
		Schistosomiasis	

^{*(}Asterisk delineates CDC Travel Health Notices present for the countries listed above which include Level 1- Practice Usual Precautions and Level 2- Practice Enhanced Precautions- <u>Travel Health Notices | Travelers' Health | CDC</u>)

Infectious Diseases of Concern by Travel History



Manchester City (MCI) and	England	Measles*	United Kingdom, including England, Scotland,
Chelsea FC (CHE)		Polio*	Wales, and Northern Ireland - Traveler view
	Mur		Travelers' Health CDC
		Hepatitis B	Infectious diseases impacting England, 2025 report
		Tuberculosis	Notifiable diseases: weekly reports for 2025 -
		Avian Influenza	GOV.UK • UKHSA data dashboard
		Pertussis	OKIISA data dasiiboard
		Tick-borne encephalitis	
		Leptospirosis	
Wydad AC (WAC)	Morocco	Measles*	Morocco - Traveler view Travelers' Health CDC
		Tuberculosis	
		Typhoid	
		Malaria	
		Leishmaniasis	
		Leptospirosis	
		Schistosomiasis	
Juventus FC (JUV)	Italy	Measles*	Italy, including Holy See and Vatican City - Traveler
		Tick-borne encephalitis	view Travelers' Health CDC
		Tuberculosis	Childhood tuberculosis cases rise by 10%: a
		West Nile Virus	disturbing wake-up call for European Region
		Dengue	
		Leishmaniasis	
		Leptospirosis	
FC Salzburg (SAL)	Austria	Measles*	Austria - Traveler view Travelers' Health CDC
		COVID-19	

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Infectious Diseases of Concern by Travel History

		Tuberculosis	
		Hepatitis B	
		Pertussis	
		Tick-borne encephalitis	
		Parvovirus B19	
		Leptospirosis	
Real Madrid C.F. (RMA)	Spain	Measles*	Spain - Traveler view Travelers' Health CDC
		Polio*	• <u>Introduction of Vector-Borne Infections in Europe:</u>
		Мрох	Emerging and Re-Emerging Viral Pathogens with
		COVID-19	Potential Impact on One Health - PMC
		Hepatitis A	
		Hepatitis B	
		Tuberculosis	
		Leishmaniasis	
		Avian Influenza	
		Crimean–Congo	
		hemorrhagic fever	
		West Nile Virus	
		Dengue	
		Leptospirosis	

^{*(}Asterisk delineates CDC Travel Health Notices present for the countries listed above which include Level 1- Practice Usual Precautions and Level 2- Practice Enhanced Precautions- <u>Travel Health Notices | Travelers' Health | CDC</u>)

Public Health Screening Tool High Consequence Pathogens of Concern: June-July 2025



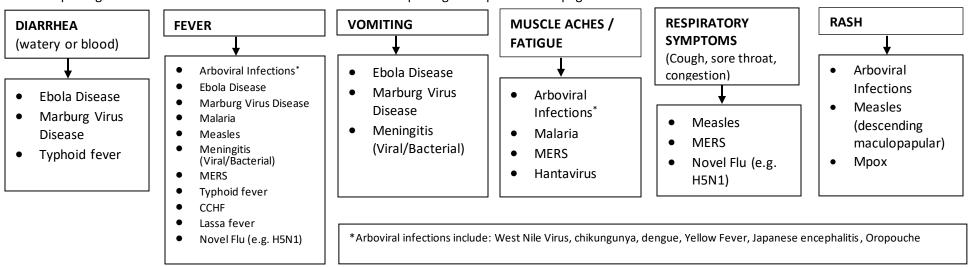
Philadelphia will be one of 11 American cities to host the 2025 FIFA Club World Cup. Though domestic fans are expected to make up the largest number of attendees, the potential increase in tourism from different parts of the world will allow for the opportunity of disease importation to the Philadelphia area as well as the potential increase of healthcare utilization. This document aids healthcare providers in evaluating patients for potential infectious diseases of concern and provides them with appropriate steps to control transmission in healthcare settings. All suspected and confirmed cases of reportable diseases, including those not on this list, should be reported to the Philadelphia Department of Public Health (PDPH) Division of Disease Control (DDC) at 215-685-6741 from 8:30am-5pm (Mon-Fri) and 215-686-4514 after hours, weekends, and holidays (press 1 for Unified Dispatch, ask for DDC On-Call staff). A list of reportable conditions and a fillable reporting form are available at https://hip.phila.gov/ReportDisease.

Recommended Screening Procedures

- As part of a complete health history and physical examination, all patients should be asked about domestic and international travel history and animal exposure in addition to participation in Club World Cup events.
- If a vaccine-preventable disease is suspected, immunization history should also be ascertained particularly for the following conditions: measles, varicella, hepatitis A, typhoid, and tetanus.
- Suspected cases of infectious diseases detailed below, unusual disease clusters or outbreaks, and/or illnesses associated with the Club World Cup should be immediately reported to Philadelphia Department of Public Health (PDPH) Division of Disease Control (DDC) at 215-685-6741 from 8:30am-5pm and 215-686-4514 after hours.

Common Signs & Symptoms and Associated Disease

Some diseases of public health concern associated with these syndromes are listed below. These lists are not exhaustive, and most symptoms will be caused by common pathogens. Additional information on a selection of these pathogens is provided on pages 2-5.



Department of Public Health CITY OF PHILADELPHI

Public Health Screening Tool High Consequence Pathogens of Concern: June-July 2025

Disease	Reporting	Circulating	Clinical	Diagnostic Testing	Testing	Patient Isolation	Sources
	Requirement	Locations	Syndrome		Lab	Precautions/PPE	
Avian Influenza (H5N1)	Immediately report suspected or confirmed infections along with specimens testing influenza A positive and unsubtypeable	Global in animals, rarely seen in humans	Fever, cough, sore throat, stuffy nose, muscle aches, fatigue, conjunctivitis, nausea/vomiting, diarrhea	Conjunctival, nasal, nasopharyngeal, oropharyngeal swabs for RT- PCR in VTM	State public health lab	Airborne, Droplet & Contact	Interim Guidance on Specimen Collection and Testing Bird Flu CDC Guidelines for Laboratory Biosafety: Handling and Processing Specimens Associated with Novel Influenza A Viruses, Including Potential A(H5N1) Virus Bird Flu CDC Highly Pathogenic Avian Influenza A(H5) Collection and Shipping Instructions PADOH
Arboviral Infections	Immediately report suspected infections and confirmed infections	Chikungunya, Dengue, Zika, Oropouche: Americas, Caribbean, Asia, Africa WNV: Africa, Europe, Americas, Middle East, Central and West Asia YF: Central and South America, Africa	Common: Fever, joint pain, headache, muscle pain, joint swelling, rash Severe: Encephalitis, Altered mental status	Serum and CSF for serology and NAAT	State public health lab with confirmatory testing at CDC, commercial labs (dengue, WNV). Contact PDPH to coordinate approval for testing at CDC prior to specimen shipment.	Standard	Clinical Testing and Diagnosis for Chikungunya Virus Disease Chikungunya Virus Disease Chikungunya Virus CDC Chikungunya Yellow Book CDC Clinical Testing and Diagnosis for Zika Virus Disease Zika Virus CDC Zika Yellow Book CDC Clinical Features and Diagnosis of Yellow Fever Yellow Fever Virus CDC Yellow Fever Yellow Book CDC Clinical Testing and Diagnosis for West Nile Virus Disease West Nile Virus CDC Diagnostic Testing Algorithm for Suspected West Nile Virus Disease West Nile Virus CDC



Public Health Screening Tool High Consequence Pathogens of Concern: June-July 2025

Disease	Reporting	Circulating	Clinical	Diagnostic Testing	Testing	Patient Isolation	Sources
	Requirement	Locations	Syndrome		Lab	Precautions/PPE	
Viral Hemorrhagic Fever Crimean-Congo hemorrhagic fever (CCHF) Ebola Virus Disease Marburg Virus Disease Sudan Virus Disease (SVD)	Immediately report suspected infections and confirmed infections	CCHF: Africa, Asia, Middle East, South- Eastern Europe Ebola: West and Central Africa Marburg: Central, East, and West Africa Lassa: West Africa	Fever, headache, joint pain, vomiting, diarrhea, hemorrhage	Serum, plasma, urine, blood Serology, ELISA, RT-PCR	CDC. Contact PDPH to coordinate approval for testing at CDC prior to specimen shipment.	See guidance for: Clinically unstable and with bleeding vomiting or diarrhea and Clinically Stable patient, without bleeding vomiting or diarrhea	Crimean-Congo Hemorrhagic Fever Virus for Clinicians—Diagnosis, Clinical Management, and Therapeutics - Volume 30, Number 5—May 2024 - Emerging Infectious Diseases journal - CDC Guidance on Performing Routine Diagnostic Testing for Patients with Suspected VHFs or Other High- Consequence Disease Viral Hemorrhagic Fevers (VHFs) CDC Post-Travel Evaluation to Rule Out Viral Special Pathogen Infection Yellow Book CDC Lassa Fever: Testing and Treatments NETEC Lassa Virus Infection: a Summary for Clinicians - ScienceDirect Collection, Transport, & Submission for Ebola Virus Testing in the U.S. Ebola CDC Clinical Guidance for Ebola Disease Ebola CDC Clinical Overview of Marburg Virus Disease Marburg CDC
Hantavirus Disease (Hantavirus Pulmonary Syndrome (HPS) and Hemorrhagic Fever with Renal Syndrome (HFRS))	Immediately report suspected infections and confirmed infections	North and South America, Europe, Asia	HPS- Fatigue, fever, muscle aches, headache, dizziness, chills, abdominal pain HFRS- headaches, abdominal pain, fever, chills,	Blood Serology, ELISA, PCR	CDC. Contact PDPH to coordinate approval for testing at CDC prior to specimen shipment.	Airborne	About Hantavirus Hantavirus CDC Clinician Brief: Hantavirus Pulmonary Syndrome (HPS) Hantavirus CDC Clinical Overview of Hantavirus Hantavirus CDC

Department of Public Health CITY OF PHILADELPHIA

Public Health Screening Tool High Consequence Pathogens of Concern: June-July 2025

Disease	Reporting	Circulating	Clinical	Diagnostic Testing	Testing	Patient Isolation	Sources
	Requirement	Locations	Syndrome		Lab	Precautions/PPE	
	·		nausea, blurred vision, redness of eyes, acute shock, low blood pressure, acute kidney failure				Clinician Brief: Hemorrhagic Fever with Renal Syndrome Hantavirus CDC
Malaria	Report next business day	Africa, Asia	Severe: Altered consciousness, seizures, severe anemia, ARDS, hepatic and renal failure	Blood RDT, blood smear	Hospital laboratories	Standard	Clinical Testing and Diagnosis for Malaria Malaria CDC Clinical Features of Malaria Malaria CDC Malaria Yellow Book CDC
Measles	Immediately report suspected infections and confirmed infections	Worldwide	Fever, malaise, cough, coryza, and conjunctivitis, Koplik spots, maculopapular rash Severe: pneumonia, encephalitis	NP or OP swab and urine RT-PCR,	State public health laboratory	Airborne	Laboratory Testing for Measles Measles (Rubeola) CDC Measles Serology Testing Measles (Rubeola) CDC Measles (Rubeola) Yellow Book CDC
Мрох	Immediately report suspected infections and confirmed infections	Central, East, and West Africa	Skin rash or mucosal lesions, fever, headache, muscle aches, swollen lymph nodes	Swab of lesion for RT-PCR in VTM OR dry swab. Consult laboratory before sending. Do not unroof lesions.	City, State public health or commercial laboratories	Contact, N95 or higher Respirator, gown, gloves, goggles or face shield	
Tuberculosis	Immediately report suspected infections and confirmed infections	Worldwide	Persistent cough, chest pain, fatigue, fever, night sweats, chills, coughing up blood/mucus	Sputum, PCR, Culture, smear	Hospital laboratory, public health laboratories, commercial labs	Airborne	Testing for Tuberculosis Tuberculosis (TB) CDC Diagnosing Tuberculosis Tuberculosis (TB) CDC Tuberculosis Yellow Book CDC



Public Health Screening Tool High Consequence Pathogens of Concern: June-July 2025

Disease	Reporting	Circulating	Clinical	Diagnostic Testing	Testing	Patient Isolation	Sources
	Requirement	Locations	Syndrome		Lab	Precautions/PPE	
Typhoid	Immediately	Southeast	Fever, malaise,	Culture	State public	Standard &	<u>Laboratory Information for Typhoid</u>
	report confirmed	Asia, Central	diarrhea or		health	Contact	and Paratyphoid Fever Typhoid
	infections	and South	constipation,		laboratory		Fever CDC
		America,	rose-colored				
		Africa,	spots				Typhoid and Paratyphoid Fever
		Caribbean					Yellow Book CDC

Summary of Biological Threats: June-July 2025



Clues to a possible bioterrorist attack:

- · Single cases of disease due to uncommon, non-indigenous agents in patients with no history suggesting an explanation for illness
- Clusters of patients with similar syndrome with unusual characteristics (e.g., unusual age distribution) or unusually high morbidity and mortality
- Unexplained increase in the incidence of a common syndrome above seasonally expected levels (e.g., increase in influenza-like illness during summer, or with negative tests for influenza and other respiratory viruses).

To report suspected cases, access diagnostic testing, or to obtain more information contact the Division of Disease Control at 215-685-6741 during business hours (8:30am-5:00pm). After hours and on weekends and holidays call 215-686-4514, press 1 for Unified Dispatch, and ask for DDC On-Call staff.

Disease	Clinical Syndrome	Incubation Period	Diagnostic Samples	Diagnostic Assay	Patient Isolation Precautions	Treatment	Post-Exposure Prophylaxis	Comments
Anthrax	 Inhalational: febrile prodrome, respiratory distress, bacteremia, meningitis. CXR: wide mediastinum Cutaneous: ulcer GI syndrome: less likely 	1-5 days (up to 42 days described)	Sputum, blood, CSF; stool, ulcer swab or biopsy (BSL-2)	Gram stain, culture, PCR	Standard (no person-to- person transmission).	Cipro 400 mg IV q 8-12 or doxycycline 100 mg IV q 12; plus 1 or 2 additional abx (e.g., rifampin, vancomycin, penicillin, chloramphenicol, clindamycin, imipenem, clarithromycin); switch to po to complete 60 days (1 agent)	Cipro 500 BID or doxycycline 100 mg BID for 60 days, plus 3-dose regimen of anthrax vaccine (available through CDC, IND protocol)	If organism susceptible to penicillin, PEP for pregnant women and children can be changed to oral amoxicillin
Brucellosis	 Febrile prodrome Osteoarticular disease, Genitourinary infection Hepatitis Endocarditis and CNS involvement rarely 	5-60 days, occasionally months	Serum; blood, bone marrow (BSL-2)	Serology; culture	Standard precautions; contact isolation if draining lesions	Doxycycline 200 mg/d po plus rifampin 600- 900 mg/d po x 6wk	Doxycycline and rifampin for 3 wks. if inadvertently inoculated	Trimethoprim- sulfamethoxazole can be substituted for rifampin, although 30% relapse rate

Plague	 Pneumonic: fulminant pneumonia, septicemia Bubonic less likely 	2-3 days	Blood, sputum, lymph node aspirate; serum (BSL-2/3)	Gram, Wright, Giemsa or FA stain; culture; Serology	Pneumonic: droplet precautions until patient treated for 3 days	Streptomycin 1gIM twice daily x 10 days, or gentamicin, doxycycline, ciprofloxacin, chloramphenicol	Doxycycline 100 mg po q 12 h x 7 days; ciprofloxacin 500 mg po BID x 7 days	Vaccine not protective against pneumonic infection
Q Fever	Fever,Systemic symptomsPneumoniaHepatosplenomegaly	10-40 days	Serum (BSL-2)	Serology	Standard	Tetracycline 500 mg po QID x 5-7 days; doxycycline 100 mg po BID x 5-7 days	Doxycycline or tetracycline: start 8- 12 d postexposure x 5 days	Vaccine available - investigational
Tularemia	 Ulceroglandular Typhoidal (septicemic): fever, weight loss, pneumonia 	2-10 days	Serum; Blood, sputum, ulcer swab, lymph node aspirate (BSL-2/3)	Serology; Gram stain, culture (PCR and DFA if available)	Standard	Streptomycin 1g IM twice daily, or gentamicin 5 mg/kg IM or IV daily or ciprofloxacin x 10 days; OR doxycycline or chloramphenicol x 14 days	Doxycycline 100 mg po q 12hrs x 14 days; Ciprofloxacin 500 mg po twice daily X 14 days	Transfer culture to BSL-3 after initial isolation of organism
Smallpox	 Fever Systemic toxicity Vesicular rash with centrifugal distribution Lesions synchronous in stage of development 	7-17 days	Pharyngeal swab, vesicular fluid, scab material (BSL-4)	ELISA, PCR, viral isolation	Airborne	None (cidofovir effective in vitro	Vaccine within 4 days of exposure, VIG (0.6 ml/kg IM within 3 days) if vaccine contraindicated	Preexposure and post- exposure vaccination recommended if > 3 yrs since last vaccination
Viral encephalitis	 VEE: fever, headache, malaise, photophobia, vomiting WEE/EEE: febrile prodrome, somnolence, delirium 	VEE 2-6 days WEE/E EE 7-14 days	Serum; CSF (BSL-2)	Serology; Viral isolation	Standard	Supportive	None	Vaccines available, although poorly immunogenic
Viral hemorrhagic fevers	 Fever, myalgia, hypotension, hemorrhagic features 	4-21 days	Serum; blood, formalin-fixed tissue biopsy (BSL-4)	Serology; Viral isolation, PCR, immunobiol ogical detection of antigen in tissue	Contact precautions (consider additional precautions if massive hemorrhage)	Supportive; ribavirin for CCHF/arenaviruses; antibody passive for AHF, BHF, Lassa, CCHF	None	Aggressive management of hypotension, secondary infections

Botulinum	 Ocular symptoms Skeletal muscle paralysis – symmetric, descending Respiratory failure 	1-5 days	Serum, stool (BSL-2), gastric aspirate, vomitus	Mouse bioassay for toxin detection; culture	Standard	DOD heptavalent antitoxin serotypes A-G; CDC trivalent equine antitoxin serotypes A, B, E	None	Skin testing for hypersensitivity before equine antitoxin administration
Staphylococcal enterotoxin B	 Fever Headache Cough Respiratory distress GI symptoms 	1-6 hours	Nasal swab, serum, urine (BSL-2)	Antigen detection (toxin) – ELISA; serology	Standard precautions	Supportive	None	Vomiting and diarrhea may occur if toxin is swallowed

Important contact information:

Philadelphia Department of Public Health......215-685-6741; After-hours on-call: 215-686-4514

Philadelphia Police/Fire/Emergency.....911

Poison Control Center......800-222-1222

Pennsylvania Department of Health.....1-877-PA-HEALTH

Summary of Chemical Weapon Threats: June-July 2025



Clues to a possible chemical attack include clusters of patients with similar syndromes or with unusual characteristics.

To report suspected cases, access diagnostic testing, or to obtain more information contact the Division of Disease Control at 215-685-6741, M-F, 8:30am – 5:00pm. After hours and on weekends and holidays call 215-686-4514 and press 1 for Unified Dispatch, ask for DDC On-Call staff. More information concerning treatment of chemical exposure can be found on the Centers for Disease Control and Prevention's website at http://emergency.cdc.gov/chemical/.

Agent	Signs	Symptoms	Onset	Diagnostic Tests	Treatment
Biotoxins: Ricin	 Clusters of acute lung or GI injury Circulatory collapse and shock Tracheobronchitis Pulmonary edema Necrotizing pneumonia Dehydration 	Ingestion: Nausea Diarrhea Vomiting Fever Abdominal pain Inhalation: Chest tightness Coughing Weakness Nausea Fever	Ingestion: 18-24 hours Inhalation: 8-36 hours	ELISA using respiratory secretions, serum, and direct tissue	Ingestion and Inhalation: No antidote; Supportive care For Ingestion charcoal lavage
Organophosphates Pesticides Malathion Parathion Chlorpyrifos Nerve Agents: Sarin Tabun Soman Cyclohexyl Sarin VX Novichok agents	 Pinpoint pupils Bronchoconstriction Respiratory arrest Hypersalivation Increased secretions Diarrhea Decreased memory/concentrati on/confusion Loss of consciousness Seizures 	Moderate exposure: Diffuse muscle cramping Runny nose Difficulty breathing Eye pain, dimming of vision, watery eyes, blurred vision Sweating Cough, chest tightness Headache Muscle tremors High exposure: Same as above	Liquids: minutes to hours Aerosols: seconds to minutes	Red blood cell or serum cholinesterase (whole blood) Treat based on signs and symptoms; lab tests only for later confirmation	Inhalation and dermal absorption: Atropine (2mg) IV; repeat q 5 minutes, titrate until effective, average dose 6 to > 15mg [use IM in the field before IV access] establish airway for oxygenation Pralidoxime chloride (2-PAMCI) 600-1800mg IM or 1.0g IV over 20-30 minutes (max. 2g IM or IV per hour) Additional doses of atropine and 2-PAMCI depending on severity

		 Sudden loss of consciousness Seizures Flaccid paralysis (late sign) 			Diazepam or lorazepam to prevent seizures if >4mg atropine given Ventilatory support
Cyanides: Hydrogen cyanide Cyanogen chloride	Moderate exposure: Metabolic acidosis Venous blood-O2 level above normal Hypotension Pink skin color High exposure: Same as above plus coma Convulsions Cessation of heartbeat and respirations	Moderate exposure: Giddiness Palpitations Dizziness Nausea, vomiting Headache Eye irritation Hyperventilation Drowsiness Restlessness High exposure: Immediate loss of consciousness Convulsions Respiratory failure leading to death within 1 to 15 minutes	Liquids: minutes to hours Aerosols: seconds to minutes	Bitter almond odor associated with patient can suggest cyanide poisoning; metabolic acidosis; Cyanide (blood) or thiocyanate (blood or urine) levels Treat based on signs or symptoms; lab tests only for later confirmation.	Ingestion, inhalation and dermal absorption: 100% oxygen by face mask; intubation with 100% FiO2 if indicated Amyl nitrate via inhalation, 1 ampule (0.2mL) q 5 minutes Sodium nitrite (300mg IV over 5-10 minutes) and sodium thiosulfate (12.5g IV) Additional sodium nitrite should be based on hemoglobin level and weight of patient.
Blister Agents/Vesicants Sulfur mustard Lewisite Nitrogen mustard Mustard lewisite Phosgeneoxime T2 Mycotoxins	 Skin erythema and blistering Watery and swollen eyes Upper airways sloughing with pulmonary edema Metabolic failure Bone marrow suppression with neutropenia and sepsis (especially sulfur mustard, late) 	 Burning, itching, red skin Mucosal irritation (prominent tearing, and burning and redness of eyes) Eyelid edema Shortness of breath Nausea and vomiting Cough Chest tightness Sore throat 	Sulfur mustard: hours to days Lewisite: minutes	Body can often smell of garlic, horseradish or mustard; Oily droplets on skin from ambient sources; Urine thiodiglycol. Tissue biopsy* (*US Army Medical Research Institute of Chemical Defense)	Inhalation and dermal absorption: Mustards: No antidote Lewisite and lewisite mustard: British Anti-Lewisite (BAL or Dimercaprol) IM (rarely available); Thermal burn therapy; supportive care (respiratory support and eye care) T2 Mycotoxins: No antidote; Supportive care
Lung/Choking/ Pulmonary Agents: Chlorine Phosgene Sulfur dioxide	Pulmonary edema with some mucosal irritation leading to acute respiratory distress syndrome or non-	 Shortness of breath chest tightness Wheezing Laryngeal spasm 	1-24 hours (rarely up to 72 hours); may be asymptomatic period of hours	No tests available. Use history to help identify source and exposure characteristics.	Inhalation: No antidote Management of secretions

Bromine	cardiogenic pulmonary edema; Pulmonary infiltrate	 Mucosal and dermal irritation and redness Coughing, Burning sensation of eyes and throat Blurred vision 			O2 therapy Treat pulmonary edema with PEEP to maintain PO2 above 60mm Hg.
Riot Agents: Chloroacetophenone Chlorobenzylidenem alo nonitrile (CS) Chloropicrin	Ocular signs: Lacrimation, erythema, corneal injury, blepharospasm. Respiratory signs: Rhinorrhea, cough, dyspnea, tachypnea, wheezing or rales, hypoxemia, pulmonary edema. Skin: Erythema, blistering	 Eye irritation and redness Blurred vision Cough Hoarseness Shortness of breath Sore throat Dysphagia Salivation Oropharyngeal and nasal burning 	Seconds to minutes, delayed onset dermatitis (8 hours) rarely	No tests available. Use history to identify source and exposure characteristics.	Inhalation, mucous membrane, dermal contact: No antidote, clothing removal and eye irrigation. Respiratory support with supplemental oxygen, bronchodilators if severe respiratory injury. Effects usually short-lived.

Important contact information:

Philadelphia Department of Public Health......215-685-6741 M-F, 8:30am - 5:00pm; After-hours and on weekends and holidays: 215-686-4514

Philadelphia Police/Fire/Emergency.....911

Poison Control Center.....800-222-1222

Pennsylvania Department of Health.....1-877-PA-HEALTH

Summary of Acute Medical Management for Radiation Exposure: June-July 2025



General Guidelines

Healthcare workers should wear a gown, double gloves, shoe covers, mask (N95 preferred), and cap as adequate protection when treating patients contaminated with radioactive material. Reassign pregnant staff to non-radiation areas.

- 1. Stabilize the patient first, followed by definitive treatment of serious injuries.
- 2. Assess external contamination by use of a handheld detection meter and decontaminate as appropriate.
- 3. Assess internal contamination and administer specific chelator/excretion enhancing agent.
- 4. Consider if high survey readings persist following decontamination. High readings around the nose and mouth may reflect inhalation or ingestion of radionuclides.
- 5. Obtain a complete blood count (CBC) with differential as soon as possible and repeat every 8 hours.
- 6. Approximate dose exposed and manage acute radiation syndrome (ARS).

Assessment of Radiation Exposure and Contamination				
Types of Radiation Exposure	Actions			
External Exposure: All or part of the body is exposed to an external	Approximate the absorbed dose and follow ARS management guidelines (see below). Decontamination not indicated. Chelation/excretion			
radiation source.	enhancing/uptake blocking therapy not indicated.			
External Contamination: Radioactive particles present on skin or clothing,	Decontaminate by removing external layer of clothing by cutting and rolling clothes away from face and place in a double bag and save. Wash			
resulting in a continuing external exposure	skin and hair with soap and water and avoid splashing. Approximate the absorbed dose and follow ARS management guidelines (see below).			
	Chelation/excretion enhancing/uptake blocking therapy not indicated.			
Internal Contamination: Radioactive particles are inhaled, ingested, or	Identify isotope and administer appropriate chelation/excretion enhancing treatment (see right). Perform external decontamination as outlined			
absorbed through open wound contamination.	above if appropriate. Approximate the absorbed dose and follow ARS management guidelines (see below).			

Management of Acute Radiation Syndrome (ARS)

Acute Radiation Syndrome: A combination of clinical signs and symptoms developing over a period of hours to weeks due to a whole or partial body exposure to ionizing radiation > 1 Gray. Tissues and organs most sensitive to damage include bone marrow, skin, intestinal crypt cells, spermatocytes

- Estimate radiation exposure dose to assess prognosis and guide medical management
- Obtain a complete blood count (CBC) with differential immediately. Document time of exposure and onset of vomiting

Dose approximation	<2 Gray	2-4 Gray	4-6 Gray	6-8 Gray	>8 Gray	
Onset of vomiting	>2 hours	1-2 hours	30 minutes -1 hour	10-30 minutes	<10 minutes	
after exposure						
% Lymphocyte decrease after exposure (may discontinue Q8H CBCs after 48 hours if no decrease observed)						
After 24 hours	0-20%	20-38%	38-60%	60-78%	>78%	
After 48 hours	0-33%	33-56%	56-78%	78-96%	>96%	
Degree of ARS	Mild	Moderate	Severe	Very Severe	Lethal	
Treatment	Supportive Care**	Supportive Care, Quinolone,	Supportive Care, Quinolone,	Supportive Care, Quinolone, Initiate	Supportive care, No quinolone, No	
Recommendations*	No antibiotics	Initiate cytokine therapy (G-	Initiate cytokine therapy (G-CSF	cytokine therapy (G-CSF or GM-CSF or	cytokines	
	No cytokine therapy	CSF or GM-CSF or pegylated	or GM-CSF or pegylated G-CSF)	pegylated G-CSF)		
		G-CSF)***				

Follow Infectious Diseases Society of America guidelines for febrile neutropenia (ANC <500 x 10 9 cells/L)

^{**}Supportive care: 1) Maintenance of vascular and hemodynamic stability through IV fluids & blood products (leukoreduced and irradiated)

²⁾ Keeping a clean patient environment through strict hand washing, scrub attire, gloves, gowns and masks for staff and visitors

³⁾ Encourage early enteral feeding to maintain gut mucosal barrier 4) Consider anti-emetics and anti-diarrheal agents

^{***}Use doses recommended by Strategic National Stockpile Radiation Emergency Medical Management https://remm.hhs.gov/int_contamination.htm#blockingagents All cytokines are not FDA approved to treat radiation exposures, and require an FDA Emergency Use Authorization (EUA)

Department of Public Health CITY OF PHILADELPHIA

Summary of Acute Medical Management for Radiation Exposure: June-July 2025

Agent Specific Treatment Guidelines for Internal Radiation Contamination

Isotope	Agent	Dose/Route/Schedule	Contraindications/Side effects/Comments
Americium Curium Plutonium	Ca-DTPA ** (Calcium diethylenetriamine Penta acetate)	Adults: 1g IV once, Children < 12 years: 14mg/kg not to exceed 1g IV once. Continued chelation based on contamination assessment, switch to Zn-DTPA for additional chelation therapy (see below).	No known contraindications. Pregnancy category C (use Zn-DTPA). More effective than Zn-DTPA during the first 24 hours after exposure. Causes mineral deficiency, monitor serum electrolytes including zinc and magnesium. Use with caution in patients with hemochromatosis. Avoid breastfeeding during treatment.
Americium Curium Plutonium	Zn-DTPA ** (Zinc diethylenetriamine Penta acetate)	Adults: 1g IV QD, Children <12 years: 14mg/kg not to exceed 1g IV QD. Continued chelation based on contamination assessment	No known contraindications. Use for continued therapy after Ca-DTPA used during first 24 hours after exposure, or as first line for pregnant patients and when Ca-DTPA is unavailable. Avoid breastfeeding during treatment.
Cesium Thallium	Prussian Blue [ferric hexacyanoferrate (II)], (Radiogardase)**	Adults: 3g PO TID, Children ages 2-12: 1g PO TID. Treat for a minimum of 30 days then re-assess contamination	No known contraindications. Side effects may include constipation and electrolyte abnormalities (monitor serum electrolytes). May color feces blue. Taken with food will stimulate biliary secretion and enhance isotope elimination. No data on safety among neonates and infants. Avoid breastfeeding during treatment.
Cobalt	GI lavage and purgatives (charcoal, laxatives). Consider penicillamine* for high dose/potentially fatal exposures.	See footnote	Penicillamine as a cobalt chelator is not FDA approved but could be considered in high dose exposure cases (>5Gy). Consult with a health physicist and Physician's Desk Reference (PDR) for indications and dosing. Side effects include leukopenia, thrombocytopenia, nephrotic syndrome. Contraindicated in pregnancy (category D). Avoid breastfeeding during treatment.
lodine	Potassium lodide (KI)**	Age 12-40 years: 130mg PO QD, 3-12 years: 65 mg PO QD, 1 month-3 years: 32 mg PO QD, <1 month: 16 mg PO QD. Treat daily until exposure risk no longer exists.	Used to prevent thyroid cancer. Contraindicated for iodine hypersensitivity. May cause thyrotoxicosis in overdose. Follow TSH in neonates to avoid transient hypothyroidism. Repeat dosing is not recommended for infants unless exposure persists. Treatment not recommended for patients older than 40 unless very high levels of exposure (>5 Gy). Pregnant and breast-feeding women are to receive only one dose.
Strontium	Aluminum Phosphate* Magnesium Sulfate * Calcium IV*	See footnote	
Tritium	Oral fluids (water)	Oral water to tolerance all patients	Administer oral water to tolerance and avoid water intoxication. Follow serum electrolytes.
Uranium	Sodium Bicarbonate* (NaHCO3)	Adults: 4g PO initially, followed by 2g PO Q4H until urine pH between 8 and 9. Pediatric doses: 84-840 mg/kg PO in divided doses Q4-6H until urine pH in desired range. IV: 2 ampules (44.3meq each; 7.5%) in 1000cc normal saline @125cc/hr until desired urine pH obtained.	Maintain urine pH between 8 and 9. Follow serum BUN/creatinine for signs of renal toxicity.

^{*}Agent not FDA approved for treatment of internal radiation contamination. For non-FDA approved agents, clinicians are advised to consult with health physicist and hospital pharmacist for dosing and schedule recommendations.

Report suspect cases of internal contamination to PDPH at 215 685 6741, after hours, weekends, holidays: 215 686 4514. PDPH can coordinate ordering of SNS medications through Emergency Management and PA DOH

- For more information on additional isotopes see: https://afrri.usuhs.edu/publications
- For more general information see: https://www.cdc.gov/radiation-emergencies/index.html or call the Armed Forces Radiobiology Research Institute (AFRRI) Emergency Medical Radiobiology Advisory Team (MRAT) at 301 295 0316.

^{**}Agent included in the managed inventory of the Strategic National Stockpile (SNS)