



FIFA 2026 Epidemiology Brief

High Consequence Infectious Diseases & Priority Importation Hazards
for Houston (HOU) host matches

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What this is not:

- Not official guidance, not prescriptive, and not comprehensive for all conditions.
- Not a substitute for CDC/DSHS/health-system protocols or facility IPC policies.
- Not authored by an HCID subject-matter expert; expert review is recommended.
- Not comprehensive to all countries potentially playing at NRG in Houston (four games have unknown competitors based on eliminations and ongoing European playoffs).
- Not created with the awareness of which (if any) team will be base-camping in the Houston area (as this information will not become known likely until January)

What this is:

- A planning aid summarizing potential importation risks, transmission fit in Houston, clinical recognition notes, and suggested messaging/MCM staging for select countries' fan bases.
- A starting point to align triggers (surveillance, isolation, PEP windows, vector ops), communications, and cache/stock readiness across jurisdictions.

Country briefs

- Curaçao — arboviruses + measles readiness
- Germany — measles/pertussis + Mpox
- Portugal — measles/mpox + dengue
- The Netherlands — measles/pertussis + mpox + XDR shigella
- Uzbekistan — measles/HepA + diphtheria/Tuberculosis
- Cape Verde — dengue + resistant shigella + measles readiness
- Saudi Arabia — MERS + dengue + measles + Meningitis

Cross-cutting operations

- Cross-cutting messaging (public, hospitals, EMS, partners)
- Medical countermeasures & anticipated stock gaps
- Recommendations
- Conclusion
- Sources

Country Brief: Curaçao → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- Dengue — aedes (mosquitos)-borne; risk of local amplification during mosquito season; avoid NSAIDs until ruled out.
- Chikungunya — aedes (mosquitos)-borne; severe arthralgia; no U.S. chikungunya vaccine planned (license currently suspended).
- Zika — aedes (mosquitos) + sexual; pregnancy-focused counseling/testing.
- Measles — airborne; short PEP windows (MMR $\leq 72h$, IG $\leq 6d$).

Houston fit (why we care)

- Aedes (mosquitos) aegypti/albopictus are established locally → imported viremic cases can seed limited transmission.
- Mass outdoor mixing increases bite opportunity; indoor venues elevate measles risk in under-vaccinated clusters.

Medical countermeasures & operational notes (high level)

- Dengue/CHIKV/Zika: (NAAT/NS1/IgM) + supportive care; IV fluid surge readiness [IV Shortage Ongoing].
- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities).

Country Brief: Germany → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- Measles — airborne; high transmissibility in venues/hotels; rapid isolation + PEP cascade.
- Pertussis — droplet/close contact; infant impact; macrolide treatment/PEP.
- Mpox — close/sexual contact; network-dependent; JYNNEOS + testing readiness.
- Meningitis — low likelihood, high consequence; <24h PEP for close contacts.
- XDR/MDR Shigella — fecal–oral/sexual networks; culture + AST to guide therapy.

Houston fit (why we care)

- Event amplification: indoor airborne/droplet (measles/pertussis) and network-based (mpox/shigella).
- Crowding increases exposure – decreases sanitation; rapid triage/isolation prevents secondary spread.

Medical countermeasures & operational notes (high level)

- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities).
- Pertussis: macrolides + PEP protocols; protect infants/OB settings.
- Mpox: lesion NAAT; JYNNEOS access; tecovirimat (TPOXX) via CDC pathways for severe/high-risk (possible long-lead time).
- Invasive Meningococcal disease (Meningitis): rifampin/cipro/ceftriaxone for PEP with rapid deployment.

Country Brief: Portugal → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- Measles — airborne; European resurgence
- Mpox — close/sexual contact; network-dependent; vaccination/testing readiness.
- Dengue — imported viremia could seed local aedes (mosquitos) transmission.
- Meningitis — low likelihood, high consequence; rapid PEP for close contacts.

Houston fit (why we care)

- Aedes (mosquitos) aegypti/albopictus are established locally → imported viremic cases can seed limited transmission.
- Mass outdoor mixing increases bite opportunity; indoor venues elevate measles risk in under-vaccinated clusters

Medical countermeasures & operational notes (high level)

- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities).
- Dengue/CHIKV/Zika: (NAAT/NS1/IgM) + supportive care; IV fluid surge readiness [IV Shortage Ongoing].
- Mpox: lesion NAAT; JYNNEOS access; tecovirimat (TPOXX) via CDC pathways for severe/high-risk (possible long-lead time).

Country Brief: The Netherlands → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- Measles — airborne; high transmissibility; rapid isolation + PEP windows.
- Pertussis — droplet/close contact; infants highest risk; macrolide PEP.
- Mpox — close/sexual contact; clade signal per EU reporting; targeted outreach.
- Meningitis — low likelihood, high consequence; PEP for close contacts.
- XDR Shigella — network-dependent; culture + AST; hygiene + counseling.

Houston fit (why we care)

- Event amplification: indoor airborne/droplet (measles/pertussis) and network-based (mpox/shigella).
- Crowding increases exposure — decreases sanitation; rapid triage/isolation prevents secondary spread.

Medical countermeasures & operational notes (high level)

- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities).
- Pertussis: macrolides + PEP protocols; protect infants/OB settings.
- Mpox: lesion NAAT; JYNNEOS access; tecovirimat (TPOXX) via CDC pathways for severe/high-risk (possible long-lead time).
- Invasive Meningococcal disease (Meningitis): rifampin/cipro/ceftriaxone for PEP with rapid deployment.
- Shigella: stool culture + AST; antimicrobial stewardship guidance.

Country Brief: Uzbekistan → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- Measles — airborne; rapid PEP windows; high venue transmission potential.
- Hepatitis A — fecal–oral; food-handler/household clusters; vaccine/IG PEP.
- Tuberculosis (incl. MDR/RR) — prolonged exposure; healthcare recognition + isolation.
- Diphtheria — droplet/close contact; antitoxin via CDC; cluster risk if delayed.

Houston fit (why we care)

- Event amplification: indoor airborne/droplet (measles/diphtheria) and Hep A (fecal–oral).
- Crowding increases exposure – decreases sanitation; rapid triage/isolation prevents secondary spread.

Medical countermeasures & operational notes (high level)

- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities)
- HepA: vaccine + IG for PEP (≤ 14 days) in indicated exposures.
- Diphtheria: antitoxin (DAT) access workflow via CDC + (possible long-lead time).
- Tuberculosis: airborne isolation + rapid NAAT + linkage to Tuberculosis program; MDR consult

Country Brief: Cape Verde → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- Dengue — aedes (mosquitos)-borne; epidemic activity per brief; local aedes (mosquitos) makes amplification plausible.
- Measles — airborne; mass indoor mixing risk; PEP windows short.
- Shigella (resistance signal) — fecal-oral/sexual; culture + AST; hygiene counseling.
- Hepatitis A — fecal-oral; food-handler clusters; vaccine/IG PEP.
- Zika — pregnancy-focused counseling/testing; aedes (mosquitos) + sexual transmission.

Houston fit (why we care)

- Vector suitability: aedes (mosquitos) established locally → dengue (and Zika in theory) have seasonal plausibility.
- Event amplification: indoor airborne/droplet (measles) and fecal-oral (Hep-A/Shingella).
- Crowding increases exposure – decreases sanitation; rapid triage/isolation prevents secondary spread.

Medical countermeasures & operational notes (high level)

- Dengue: (NAAT/NS1/IgM) + supportive care; IV fluid surge readiness [IV Shortage Ongoing].
- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities).
- Shigella: stool culture + AST; antimicrobial stewardship guidance.
- HepA: vaccine + IG for PEP (≤ 14 days) in indicated exposures.

Country Brief: Saudi Arabia → Houston (HOU)

Priority conditions, Houston fit, and countermeasure considerations



Priority conditions (watch-outs)

- MERS-CoV (HCID) — severe pneumonia; healthcare-amplified risk; rapid PUI isolation/testing.
- Dengue — aedes (mosquitos)-borne; imported viremia could seed local transmission in mosquito season.
- Measles — airborne; high local potential in undervaccinated clusters.
- Meningitis — high consequence; rapid therapy + close-contact PEP.

Houston fit (why we care)

- MERS: community spread is typically limited, however Crowding increases exposure – decreases sanitation; facility preparedness and PPE adherence are key.
- Dengue: aedes (mosquitos) in Harris County + warm season → plausible local amplification if viremic travelers arrive.

Medical countermeasures & operational notes (high level)

- MERS: rRT-PCR on lower-respiratory specimens preferred; no specific antiviral approved—supportive care; strict airborne + contact + eye protection.
- Dengue: (NAAT/NS1/IgM) + supportive care; IV fluid surge readiness [IV Shortage Ongoing].
- Measles PEP: MMR supply + immune globulin access plan (often constrained / hard to get in large quantities)
- Invasive Meningococcal disease (Meningitis): rifampin/cipro/ceftriaxone for PEP with rapid deployment.

Cross-cutting messaging

Tailor to local policy; emphasize early recognition, prevention, and when to call ahead

General public (fans, volunteers, hosts)

- Stay home if ill; seek care for fever + rash, severe cough, jaundice, or severe headache/bleeding.
- Verify MMR and routine vaccines before travel/events
- Prevent mosquito bites (repellent, long sleeves, eliminate standing water), especially if febrile after travel.
- Risk-aware sexual health messaging during mass gatherings (mpox/shigella networks).

Hospitals / clinics (ED, urgent care, primary care)

- Triage prompt: international travel ≤ 30 days + fever/rash/cough/jaundice/hemorrhagic signs.
- Immediate airborne isolation for suspected measles/Tuberculosis
- Prepare for surge in IV needs (anticipate logistics, advocate shortage)
- PEP readiness: measles (MMR ≤ 72 h / IG ≤ 6 d), Pertussis and Meningitis contact prophylaxis.
- Arbovirus workflows: dengue NAAT/NS1 early; avoid NSAIDs until dengue excluded; counsel bite avoidance while febrile.
- Special pathogens (MERS): rapid isolation, specimen routing, and public-health/CDC consult.
- Notification Contact Information: Local Health Departments

EMS / first responders

- Mask and notify destination for fever-with-rash or severe respiratory illness + travel history.
- Use appropriate PPE (airborne/droplet/contact per dispatch); minimize aerosol-generating procedures without full PPE.
- For suspected mpox: cover lesions; gloves/gown; routine decon.
- Document venue exposures (hotel/arena/fan zone) to support public-health tracing.

Stakeholder agencies / partners

- Establish a fast notification path between hospitals, public health, and event operations.
- Pre-coordinate immune globulin, and special-pathogen consult/transport.
- Coordinate mosquito-control surge triggers and public messaging.
- Exercise PEP cascades for measles and Meningitis (timelines, staffing, dispensing) [ensure proper PPE stockpiles on hand].

Medical countermeasures (MCMs) — what to stage & what may bottleneck

Emphasis on items not routinely stocked in large quantities or requiring special access pathways

High-probability / high-impact (most likely - exercise now)

- Measles PEP: MMR vaccine (routine) + immune globulin (IG) procurement and dispensing plan (often constrained / hard to get in large quantities).
- Dengue readiness: NAAT/NS1 testing access + clinical protocols (no NSAIDs!).
- Multiple HCID and Heat Casualties: IV fluid/bag surge readiness [IV Shortage Ongoing].

Network / specialized pathways (hard to get - conduct logistics planning now)

- Mpox: JYNNEOS access plan + lesion NAAT; tecovirimat (TPOXX) pathway familiarity for severe/high-risk cases.
- Resistant shigella: stool culture + AST logistics; antimicrobial stewardship guidance for limited oral options.
- Tuberculosis (incl. MDR): airborne isolation capacity; rapid NAAT; linkage to Tuberculosis program + DST pathways.

HCID readiness (less likely but high-consequence – educate self/staff)

- MERS: PPE, specimen shipping, and expert consult trees (avoid indiscriminate antiviral stockpiling).
- Meningitis PEP: rifampin / ~~ciprofloxacin~~ / ceftriaxone with <24h deployment capability.
- Pertussis: macrolides for treatment + PEP; protect infants/OB workflows.

Recommendations

Suggested planning priorities for June–July 2026 operations

Top priorities (highest leverage)

- Measles: airborne isolation + fast testing + PEP logistics (MMR ≤ 72 h; IG ≤ 6 d).
- Dengue/arboviruses: NAAT/NS1 testing access + clinical protocols + mosquito-control + public messaging.
- IV fluid/bag surge readiness [IV Shortage Ongoing].

Second-tier hazards (still plan for)

- Pertussis, Hepatitis A: time-sensitive PEP workflows and communications (households, food-service).
- Mpox / resistant Shigella: targeted outreach + culture/AST readiness + vaccination pathways.
- Tuberculosis (incl. MDR): sustained isolation/testing capacity + linkage to Tuberculosis control.
- Meningitis: rapid recognition + immediate ceftriaxone + close-contact PEP within 24 hours.

Operational actions to close gaps (follow-up actions)

- Run tabletop exercises: measles PEP, Meningitis PEP cascade, dengue clinical + vector response, HCID PUI routing.
- Confirm procurement pathways: immune globulin, DAT access workflow, and specialized consult contacts.
- Align messaging with partners; standardize travel-screen triage prompts across facilities.
- Remember! There will be people from more than just these countries! Expect the unexpected, communicate, and keep planning.

What's the point?

- Mass gatherings + mass movement have repeatedly produced mass outbreaks.
 - 1918 influenza (“Spanish Flu”) + World War I mobilization: crowded troop trains, camps, and ports accelerated transmission and global spread.
 - Hajj (2000–2001) meningococcal outbreaks (W135): dense international mixing led to cases exported across multiple countries and drove major vaccination/PEP policy changes.
- World Cup conditions are an “amplifier” system: crowding + shared sanitation + food service + transit + lodging + June heat/humidity + indoor A/C congregation + aedes (mosquitos) mosquito season → faster chains of transmission and harder operations (triage, isolation, contact tracing, PEP, risk communication).
- Real-world examples of the mixer effect under event logistics:
 - PyeongChang Winter Olympics (2018): norovirus outbreak among event/security staff disrupted operations and required large-scale staffing replacements and containment actions.
- Operational reality: even “routine” pathogens become disruptive at scale (testing volume, isolation room demand, IG/MMR/PEP logistics, EMS transports, staffing shortages, rumor control).

Texas vs The World

- This is Texas vs The World, and for us, it's the Greater Houston Metropolitan Area and surrounding counties, vs The World and the world is going to throw the nastiest, slimiest, smelliest, most unpredictable thing it has at us in large numbers - "people."
- But we have people too, so start breaking out your business cards because the best chance any of us have at Houston winning the world cup, is one another.
- Thank you for your time, what are your questions?

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