APHL/CDC Influenza Surveillance 2025-2026 Season Kick-Off

September 10, 2025

Call Summary

Quick link to Guidance: National Influenza Surveillance Guidance

Contact for Questions or Suggestions:
APHL Influenza Contact: fluquestions@aphl.org
CDC Influenza Division: flusupport@cdc.gov, idseqsupport@cdc.gov

Influenza Updates and Situational Awareness

(Alicia Budd, CDC, acp4@cdc.gov)

2024-2025 Season

The 2024-2025 season saw record levels of seasonal influenza in the US. Influenza A predominated throughout the season, with relatively little Influenza B activity. Influenza A was nearly evenly split between subtype H3 at the beginning of the season and H1 at the end. Since the SARS-CoV-2 pandemic, alterations in influenza season timing have been observed, but this season returned to within normal bounds. Activity began increasing substantially in November 2024 and peaked in February 2025. By May 2025, activity had declined to low inter-seasonal levels. Low levels of influenza activity continued over the summer, most of which was Influenza A(H1).

The 10 HHS surveillance regions had a similar distribution of viruses during the season; no significant geographic variability was identified across the country. Across age groups, the 5-24 year old range had slightly more influenza B activity than other age groups, and slightly less influenza A(H1).

Specimen submissions to the National Influenza Reference Centers (NIRCs) by public health laboratories (PHLs) throughout the season were greatly appreciated and enabled CDC's viral characterization activities. CDC's analyses determined the following:

- Influenza A(H1) viruses during the season were a mix of 5a.2a and 5a.2a.1 clades. Nearly all of these viruses were antigenically similar to the vaccine reference virus.
- Influenza A(H3) viruses were predominantly 2a.3a.1 clade; just over half of the viruses tested were antigenically similar to the cell grown vaccine reference virus.
- Influenza B/Victoria viruses were all 3a.2 clade and nearly 90% were antigenically similar to the cell grown vaccine reference virus.
- Very little reduced susceptibility was observed across approximately 5,000 influenza-positive specimens tested for susceptibility to antivirals.

Timely specimen submission for surveillance remains key! Please continue to submit specimens to the NIRC – even during the early season.

While the timing of this past season returned to a normal pattern, activity and severity were not normal. This qualified as a high severity season; the first since the 2017-2018 season. There were record levels of influenza activity, regardless of the severity of illness. Record levels were seen among outpatient visits, emergency departments, hospitalizations and deaths. The FluSurv-net system reported the highest cumulative rate of influenza-associated hospitalization since the 2010-2011 season. More deaths were reported in the influenza-associated pediatric mortality system than in any non-pandemic season since these deaths became reportable in 2004.

Novel Influenza Activity

Since April 2024 (the start of the current outbreak in animals in the US), there have been 70 human influenza A(H5N1) cases detected. Of these, 55 occurred during the 2024-2025 surveillance season, with the last case in February 2025. Most cases were tied to exposure to infected cattle or birds. In recent months, H5 activity in animals has decreased. However, migration season is coming so we need to keep an eye out for increased activity in migratory birds and other animals (and therefore increased human risk). Testing remains essential for monitoring exposed individuals. Additionally, 6 of the 70 cases have been identified through routine surveillance, highlighting the importance of subtyping data. 90% of influenza A specimens were subtyped overall for the 2024-2025 season. CDC's goal is for 95% of influenza A viruses to be subtyped.

Outside of H5N1, one novel influenza A infection (H1N2v) was observed during the season in an adult that was hospitalized and recovered. Investigation found no swine contact associated with case, so the source of exposure was not identified. No human-to-human transmission was identified.

Southern Hemisphere Activity

Over the last couple of months, there has been some regional variability, in the predominant virus subtype and the timing of activity in the Southern Hemisphere. Influenza A viruses have been predominant with H1 subtype prevailing in most areas. The exception to that has been among African countries where H3 has been the predominant virus. Timing also varied geographically across the southern hemisphere. Some countries in South America and Africa had seasons that started earlier, but other countries including Australia and Brazil had a slightly later start to their season. The activity in the Southern Hemisphere is not always a direct indicator of what we might see here in the US, which is why PHL surveillance efforts are so important.

Influenza Surveillance Guidance Updates

(Becky Kondor, CDC, dqy5@cdc.gov)

CDC thanks PHLs for the viruses submitted for national surveillance, which are critical for creating candidate vaccine viruses.

This season's guidance document is now posted on the APHL website (2025-26 INFLUENZA SEASON SURVEILLANCE GUIDANCE). There are no major changes to guidance from last year. CDC is still recommending PHLs submit the same number of specimens to their NIRCs every 2 weeks (Appendix 2: CDC guidance for influenza virus surveillance during the 2025-26 influenza season):

- 6 influenza A(H3N2) positive specimens
- 4 influenza A(H1N1)pdm09 positive specimens

- 4 influenza B positive specimens

Please continue to follow the right size testing guidance for your state to ensure that specimens are submitted to your PHL and remain available for submission to your NIRC.

Antiviral resistance surveillance is covered in Appendix 3: CDC guidance for influenza antiviral resistance surveillance during the 2025-26 influenza season. This submission guidance is also very similar to last season, but with a couple of updates. CDC has changed the method for detecting the mutations that are associated with antiviral susceptibility. This testing will now be conducted at Wadsworth using NGS. Analysis of specific mutations in neuraminidase and polymerase will be reported for the specimens PHLs are submitting for antiviral susceptibility surveillance. Laboratories may submit up to 5 specimens every other week for antiviral resistance surveillance, however **these specimens should be in addition to what you are submitting to the NIRCs. Always submit specimens for surveillance to the NIRCs first before submitting additional viruses for antiviral resistance surveillance.**

Influenza Testing Updates

(Marie Kirby, CDC, pbi0@cdc.gov)

Resources

CDC sent out an email on September 9th with the yearly allocation for the enzymes used for the influenza diagnostic kits. If your laboratory did not receive that email, please reach out to either IRR (IRR: Contact Us) or flusupport@cdc.gov. Enzyme allocations are established based on right size goals. Once jurisdictions use that enzyme allocation, additional enzyme would need to be purchased directly from the commercial vendor. The distribution and manufacturing of CDC's oligo kits are also based on right size goals. As in previous seasons, labs should continue to include justification information in order comments when ordering additional kits.

Last season, CDC moved from the *in vitro* diagnostic (IVD) kit to the research use only (RUO) kit for B lineage typing and it was no longer a requirement to type. As we move further out from any detection of a B/Yamagata, that test becomes less and less useful. The RUO kit is available if PHLs want to continue that influenza B surveillance in their state. If PHLs do not want to perform influenza B typing, please continue to submit influenza B positive specimens to your NIRCs so that CDC can continue that surveillance and characterization through sequencing.

CDC now has the Influenza A subtyping Kit Version 4 available in IRR for this season. The kit contains the updated H3 assay. If PHLs still need the Version 3 kit, there is some availability, but labs should transition over to Version 4.

Influenza A(H5N1) Diagnostics

Given the recent response, CDC remains vigilant for any other novel viruses. If PHLs have a specimen that comes up as an influenza A unsubtypable, or as inconclusive, contact Dr. Marie Kirby at pbi0@cdc.gov (404-718-7689) or flusupport@cdc.gov to coordinate shipment to CDC for characterization. As birds start to migrate CDC wants to be ready in the event that cases rise again. Guidance remains the same that the first three H5 identified cases at a PHL are considered presumptive positives and the specimens must come to CDC for confirmatory testing. After three specimens have been confirmed as H5 positive at CDC, subsequent specimens could be confirmed at the PHL (PHLs who previously identified three of more cases in the 2024-

2025 season that were confirmed by CDC may continue to confirm at the PHL during the 2025-2026 season). However, CDC still needs to receive those H5 specimens to conduct further characterization. Please reach out to Dr. Marie Kirby or flusupport@cdc.gov if you have any questions.

Regulatory Updates

The FDA has approved CDC's Predetermined Change Control Plan (PCCP), which will allow CDC to add new real-time PCR instrumentation, as well as new extraction platforms, to the influenza portfolio. CDC will be working on that this season and there will be additional updates to follow. CDC is evaluating the following equipment:

- Extraction platforms:
  - Roche MagNA Pure 24
  - Qiagen EZ 2 Connect DX
  - Thermo KingFisher Apex DX

- Real-Time PCR Platforms:
  - Thermo QuantStudio 5 Dx
  - Thermo QuantStudio 7 Pro Dx
  - BioRad Opus

Data Reporting Updates

(Krista Kniss, CDC, krk9@cdc.gov)

There are no major changes regarding PHL reporting for virologic surveillance for the upcoming season. The majority of PHLs are reporting to CDC through PHLIP 2.5.1 for both influenza and SARS-CoV-2 as well as other NREVSS pathogens.

Both CDC and APHL PHLIP assistance team are encouraging PHLs to upgrade from the PHLIP 2.3.1 mechanism to PHLIP 2.5.1. The deadline for this transition is September 2026 as CDC needs to upgrade technology for internal data analysis. Only 4 laboratories are reporting through 2.3.1 and some of those labs have already started the transition. If PHLs are using 2.3.1 and have not started that transition yet, please reach out to CDC (Krista Kniss [krk9@cdc.gov] and Angiezel Morales [png6@cdc.gov]) and APHL PHLIP technical assistance (TA) team (informatics.support@aphl.org).

If any major LIMS changes or upgrades are happening, or PHLs are adding additional assays to their LIMS that could result in an influenza or SARS-CoV-2 positive, please engage with the PHLIP TA team to make sure the correct validations are performed on those upgrades and/or assays.

If PHLs are planning on using the Influenza B RUO kits, CDC would still appreciate receiving the Influenza B lineage test information. CDC understands this request may be a challenge for some laboratories. If so, please reach out to CDC to work on possible solutions for implementation.

The CDC Flu Web Portal is a resource for submitting laboratories. This portal is where PHLs can go to receive results on viruses that they have submitted to the NIRCs for surveillance purposes. These reports will include both the genetic and antigenic results on those specimens. Additionally, PHLs can also look at other laboratory surveillance data from their state. CDC has also added a copy of each jurisdiction's 2024-2025 Right Size Report Card to the portal. One person from each laboratory should have access to this portal. User IDs and passwords were distributed in 2018. If there have been staffing changes and you require user

updates, or you need to determine who is delegated for your organization, please reach out to Krista Kniss (krk9@cdc.gov) and Angiezel Morales (png6@cdc.gov) for assistance.

International Reagent Resource

(Vic Veguilla, CDC, dhu3@cdc.gov)

The Influenza A Version 3 subtyping kit (FR-1716) has been replaced by Version 4 (FR-1884), which includes an updated H3 assay design to address emerging H3N2 viruses. If you need an FR-1716 kit, please contact FluSupport@cdc.gov.

SuperScript™III Platinum™ One-Step Quantitative RT-PCR System (without ROX) is still available under catalog number FR-102. This is the only qualified lot for use with influenza diagnostic testing. Other programs may have this enzyme available under different catalog numbers, but they are not authorized for influenza testing. Please ensure you use FR-102 for influenza testing only.

The expiration date for CDC Human Specimen Control (ER-38) has been extended to October 24, 2025. An additional extension is in process.

The expiration date for the Influenza A/H7 Assay (FR-1240, lot 230120) has been extended to October 21, 2025. Additional extensions are in process.

IRR Kit Distribution

Diagnostic kit allocation is based on each state's right size goals and evolving testing needs. This ensures equitable national distribution while accounting for manufacturing limits and preserving stock for emergency responses. Allocations are adjusted based on epidemiological trends, laboratory justifications, and data reporting to provide timely support throughout the year. Distribution for the Flu SC2 Multiplex Assay will be the same as last year. CDC recommends it as the primary assay for influenza and SARS-CoV-2 surveillance in PHLs.

IRR Ancillary Distribution

CDC's Influenza Division (ID) is continuing to provide ancillary reagents to support the weekly influenza subtyping goals for novel virus detection. IRR will provide ancillary supplies in quantities that match the number of reagents needed to support each state's right size goals. States should have already received, or will soon receive, an email reminder email titled "2025 2026 Influenza Surveillance Enzyme Allocation" outlining this ancillary allocation limit. Please watch for this message and notify flusupport@cdc.gov if you have not received it by next week. **NOTE:** Some of these emails bounced back. Each lab must maintain at least one active registered IRR user to ensure continuity of support and receipt of important updates. Please register a new user right away when staff changes occur.

State laboratories can submit orders for the new influenza season from September 1, 2025 through August 31, 2026. **NOTE:** California, Texas, Florida and New York ae the only states where regional laboratories are permitted to order directly in order to meet the right-size novel virus detection goals. For all other states, CDC defers further allocation from this reserve to local or branch laboratories at the discretion of the state laboratory. This helps CDC ensure flexibility while maintaining state level oversight to make sure that resources are distributed appropriately to local or branch laboratories based on need.

If a laboratory requires additional enzyme beyond their allocation, it must be purchased directly from commercial manufacturers.

Website Functionality and Ordering Tips

Laboratories can sign up for automatic product notifications for temporarily out of stock (TOS) items, or for products flagged with important banners, such as those undergoing expiration extensions. These notifications will send an alert when an item is back in stock, a new lot is available, or when an expiration date has been extended.

CDC asks laboratories to align their orders with immediate testing needs so that product shelf life can be maximized.

When placing an order on the IRR website, please make use of the order comments section to provide justification for the items that you're requesting (e.g., technical issues, the need for new lots or an increase in positive detections in your state). Including this information is critical so that CDC can properly route the request and expedite the approval of orders.

Influenza Sequencing Guidance

(Ben Rambo-Martin, CDC, nbx0@cdc.gov)

If PHLs are starting to sequence influenza, CDC greatly appreciates that effort and encourages you to reach out to us at idseqsupport@cdc.gov. CDC has tools available to use to help ensure quality in your sequencing. You are strongly encouraged to use CDC's preferred assembler, IRMA, as it does a great job of assembling the diversity of flu that PHLs are going to encounter. CDC has a platform called MIRA which runs IRMA. Labs can use MIRA, either locally on a machine, or installed into a cluster.

CDC ID is working closely with the Office of Advanced Molecular Detection (OAMD) on hosting MIRA within the new AMD Platform and CDC is looking forward to opening access up to state partners soon. Using this vetted pipeline, PHLs can be confident in their influenza sequencing quality. CDC is still actively developing MIRA and IRMA and would appreciate any feedback from PHL's . CDC continues to add functionality to improve the ease of sequencing.

Appendix 6: CDC Guidance to Laboratories Performing Next Generation Sequencing of Influenza Virus Genomes in the guidance document addresses sequencing quality metrics, as well as the standard strain naming conventions and required metadata for submission to NCBI and GISAID. There are also umbrella BioProjects that have been established with NCBI for flu genome submission. If PHLs are conducting sequencing surveillance, CDC would encourage labs to set up their own BioProjects for the three seasonal subtypes (Vic, H1 and H3). That BioProject created for your own group can then be attached to CDC's larger umbrella BioProjects. There are instructions on how to do that in the guidance. Please reach out to CDC at idseqsupport@cdc.gov with any questions.

Questions & Answers

Q: Is there an umbrella BioProject for H5?
A: No. CDC has been directly submitting H5 sequences under a single BioProject over the last season. If this becomes necessary, CDC could set up an umbrella. However, that does not seem to be a need at this point.

Q: If Wadsworth is doing the antiviral susceptibility surveillance WGS testing on state samples, will they also accept samples from local SPHL doing their own sequencing? Especially if viral resistance is suspected based on Epi evidence?
A: If the laboratory is not submitting to Wadsworth under antiviral surveillance (per instructions in Appendix 3) and instead has additional epidemiological information and has already sequenced the specimen locally, please reach out to CDC directly and they can help with sequence analysis for that particular case.

Q: Is the accelerated flu subtyping process still in place for next year?
A: If this is in reference to the HAN that went out last year (i.e., 24-hour guidance), this year we do not have a specific time frame included in the recommendations for subtyping influenza A positive specimens. But timeliness is still critical, especially if you have someone with animal exposure.

Q: There does not appear to be a preference for number of NGS sequences to be generated and submitted to data repositories (NCBI/GISAID) for laboratories that choose to conduct sequencing. Can CDC comment?
A: If your state has specific questions you would like to answer through genetic sequencing, reach out to CDC and they can help you tailor that number to help meet your goal. As a reminder, right size goals (and from that the sub-selection of specimens for sequencing through NIRCs) define national surveillance goals for sequencing. Submitting specimens accordingly to your NIRC to fulfill your goals for national surveillance should remain a first priority, before conducting influenza sequencing in your jurisdiction with additional specimens. Anything done at the states as far as sequencing influenza is done to help address state-level questions. There are not CDC-dictated state sequencing goals.

Q: Can IRR reagents be used for verification – such as the new H3 primer set?
A: For the oligos, yes. You would have to use those for those kinds of verifications. For enzyme, the allocation is what was indicated in the email, so that must be taken into account when you use those reagents. You may need to supplement with commercially bought enzyme.

Q: Are the extraction and PCR platforms that will be added to influenza assays the same as have been previously presented?
A: Yes.

- Extraction platforms:
  - Roche MagNA Pure 24
  - Qiagen EZ 2 Connect DX
  - Thermo KingFisher Apex DX

- Real-Time PCR Platforms:
  - Thermo QuantStudio 5 Dx
  - Thermo QuantStudio 7 Pro Dx
  - BioRad Opus

Once those are cleared, CDC can discuss other needs of PHLs.

Q: Is this instrumentation in addition to what is in the current IFU?
A: These extraction and real-time platforms are being evaluated to be added to the current influenza IVD portfolio (the single plex assays). The Flu SC2 assay is currently an EUA. CDC is working this year on transitioning that multiplex Flu SC2 assay to IVD. During that transition, they will align some of the extractors in the 510k for diagnostic approval with those already approved for the IVD singleplex assays. Once IVD is established for Flu SC2 through the 510k process, the PCCP mechanism will be used to add more platforms to the multiplex Flu SC2 assay.

Q: Will EMAG automated extraction platform be added to the Flu SC2 assay?

A: CDC was unable to get data from the EMAG to add to the multiplex Flu SC2. It is approved for singleplex IVD influenza assays. CDC will need to collaborate with a PHL with a working EMAG to be able to obtain data to consider addition to the Flu SC2 multiplex in the future.

Q: Is there a reason why CDC would discourage labs from performing internal validations for the KingFisher Apex, for example, ahead of your FDA approvals?
A: PHLs need to work with their diagnostic regulatory bodies to ensure they are in keeping with appropriate requirements if they opt to create a Laboratory Developed Test (LDT). Until CDC has the data to support addition of these platforms, CDC cannot guarantee they will be added. No issues are anticipated, but adequate performance has to be achieved in order to add them.