

Statement of Work (SOW)

Modernization of the Influenza-Like Illness (ILI) Surveillance Process and Algorithms Project

1. BACKGROUND AND OBJECTIVES

The Indian Health Service (IHS) utilizes the Influenza-like Illness Awareness System (IIAS) to support syndromic surveillance activities across the IHS, Tribal, and Urban (I/T/U) health system. The system was established during the 2009 H1N1 influenza pandemic to provide situational awareness regarding influenza-like illness (ILI) activity and influenza vaccine coverage among populations served by I/T/U facilities. The system relies on participating facilities to submit automated daily export files, which are aggregated to generate surveillance reports at the IHS national, Area, and local levels.

Although the system has provided valuable surveillance information for more than a decade, there is a need to evaluate the current infrastructure, data flows, reporting processes, automation capabilities, and sustainability of the processes. Existing challenges include limited documentation, reliance on legacy processes, variability in reporting participation, limited transparency in data-processing methods, and constraints on scalability for monitoring additional syndromes and emerging public health threats.

The purpose of this project is to evaluate, enhance, validate, and operate a robust and sustainable ILI surveillance system that supports timely situational awareness, public health decision-making, and future surveillance expansion. These enhancements to the existing system should improve automation, transparency, data quality, and reporting capabilities while maintaining compatibility with existing I/T/U data sources. The newly established processes and algorithms will be owned and ultimately managed by the Indian Health Service. This project will follow a structured approach, emphasizing validation, automation, documentation, and scalability planning.

2. SCOPE OF WORK

The Contractor shall provide project management, technical, epidemiologic, and public health surveillance expertise to assess existing surveillance systems and leverage findings to strengthen and modernize surveillance and epidemiologic analytics capabilities. Services shall include system and process analysis, process mapping, documentation, requirements development, implementation, validation, and development of reports. The Contractor shall support the evaluation and enhancement of the IHS ILI surveillance system, including its associated processes, methodologies, and algorithms, to improve data quality, performance, and public health decision-making.

This work will focus on evaluating current ILI surveillance processes and algorithms; identifying gaps and opportunities for improvement; developing and implementing an enhanced surveillance repository and processes; validating outputs; automating reporting processes; and establishing sustainability processes. The primary data source for this project will be existing daily ILI export files submitted by participating I/T/U facilities. The resulting enhancements to the existing infrastructure should support future expansion to additional syndromic surveillance activities, if desired by IHS.

Task 1: Evaluation of Existing ILI Surveillance System

The Contractor shall conduct a comprehensive assessment of the current ILI surveillance processes and algorithms in accordance with the CDC Guidelines for Evaluating Public Health Surveillance Systems. The Contractor will develop a recommendations report outlining gaps and opportunities for system improvement or restructuring.

Activities shall include:

- Assess IIAS performance across CDC surveillance evaluation attributes where applicable, including:
 - Simplicity
 - Flexibility
 - Data quality
 - Acceptability
 - Sensitivity
 - Predictive value positive
 - Representativeness
 - Timeliness
 - Stability
- Review the current ILI surveillance system architecture, workflows, data sources, reporting processes, and outputs.
- Coordinate with stakeholders within the Division staff to discuss processes, gaps, and opportunities.
- Evaluate current reporting participation and data completeness.
- Identify operational and technical gaps.
- Develop recommendations for modernization and expansion.

Deliverable: Evaluation Report including findings, gap analysis, and recommendations.

Task 2: Design, Develop, and Validate Enhanced ILI Surveillance Processes

The Contractor shall design and develop enhancements to the current surveillance system.

Activities shall include:

- Develop an enhanced architecture with capability for expansion to other diseases
- Develop efficient programming to support a fully automated surveillance system
- Build automated data ingestion and processing capabilities that streamline workflow
- Standardize data structures, methodology and business rules
- Establish automated monitoring of file receipt and participation in reporting
- Develop notification and alert capabilities for missing or delayed submissions
- Develop reporting capability at:
 - National level
 - Area level
 - Facility level
- Develop documentation describing:
 - Data flow
 - Data transformations
 - Calculations
 - Business rules
 - Limitations
 - Assumptions
- Validate the enhancements of the system to ensure accuracy and reliability
- Assess data completeness and consistency
- Compare system outputs to relevant CDC surveillance measures, including available ILINet indicators where appropriate

Deliverables:

- Functional updated system architecture incorporating all recommendations outlined in the Evaluation Report and approved by IHS
- Data flow diagrams
- Technical documentation
- User Guide
- Standard Operating Procedures
- Automated monitoring framework
- Validation and Quality Assurance Report

Task 3: Automated Reporting, Analytics, and Dissemination

The Contractor shall develop automated reporting and dissemination structures in the existing ILI system.

Activities shall include:

- Develop automated surveillance reports at national, Area and facility levels
- Create dashboards and visualization tools using Power BI or Qlik
- Develop report interpretation guidance and statistical approaches to account for:
 - Missing data
 - Incomplete reporting
 - Participation variability
- Create user guidance for report interpretation
- Establish automated dissemination processes

Deliverables:

- Automated reporting framework and sample reports at national, Area and facility levels
- Dashboard prototypes
- Report interpretation guidance
- Dissemination plan

Task 4: Future Expansion Planning

The Contractor shall develop recommendations to support future expansion of the system for other syndromes.

Activities shall include:

- Develop transition plans for ongoing management by IHS
- Identify elements to expand surveillance infrastructure to additional syndromes. This includes developing a process, and accompanying instructions, for enhancing existing ILI system code to accommodate the addition of other syndromes as necessary in the future.
- Develop onboarding documents to train staff on how to run the system

Deliverables:

- Roadmap for expansion
- Staff onboarding and training document
- Conduct Knowledge transfer sessions for IHS personnel
- Final project report

3. DELIVERABLES

Task 1 Deliverables – due December 4, 2026

1. Evaluation Report including findings, gap analysis, and recommendations

Task 2 Deliverables – due March 19, 2027

1. Fully functional enhanced ILI surveillance system incorporating all recommendations outlined in the Evaluation Report and approved by IHS
2. Technical Documentation, including:
 - Data Flow Diagrams
 - User Guide
 - Standard Operating Procedures
 - Automated Monitoring Framework
 - Validation and Quality Assurance Report

Task 3 Deliverables – due May 28, 2027

1. Automated Reporting Framework, including:
 - Sample Reports
 - Dashboard Prototypes
 - Report Interpretation Guidance
 - Dissemination Plan

Task 4 Deliverables – due July 16, 2027

1. Roadmap for Expansion
2. Onboarding and training document for new IHS staff
3. Conduct Knowledge transfer sessions for IHS personnel
4. Final Project Report

Quarterly progress reports:

Due: January 15, 2027
April 16, 2027
August 20, 2027

All deliverables must be delivered electronically or in person, as applicable, to the Program Manager and Contracting Officer's Representative (COR). Deliverables will be accepted upon review and approval by project stakeholders, with final approval resting with the COR.

Deliverables will be accepted upon:

- Review and approval by designated IHS project stakeholders.
- Demonstration that project objectives have been met.
- Successful validation of system functionality.
- Demonstrated usability of reporting products and documentation.
- Completion of knowledge transfer activities.
- Acceptance of final deliverables by the Contracting Officer's Representative (COR).

The Contractor shall ensure:

- Deliverables are accurate, complete, and actionable.
- Technical documentation is comprehensive and maintainable.
- Reports are suitable for operational public health decision-making.
- Stakeholder feedback is incorporated appropriately.
- System functionality meets agreed-upon requirements.
- Deliverables are completed within established timelines.

4. PERIOD AND PLACE OF PERFORMANCE

Estimated Period of Performance: October 19, 2026 – July 31, 2027

The contract will be performed off-site, at contractor's facility/place of work.

5. TRAVEL

No travel is required or included in this contract. Should travel become necessary, it shall be in accordance with Federal Travel Regulations and must be approved in advance by the Contracting Officer and COR before any costs are incurred.

6. GOVERNMENT FURNISHED INFORMATION/PROPERTY

The Government will provide access to relevant reporting systems and documentation, access to SMEs and stakeholders, and access to relevant existing reports and data sources, including:

Access to current ILI surveillance documentation

Existing system outputs and reports

Access to SMEs and stakeholders

Access to relevant data sources and data dictionaries

Existing process documentation

Technical coordination with OIT

Historical surveillance reports and reference materials

No Government-Furnished Property (GFP) will be provided under this contract.

7. SPECIAL CONSIDERATIONS

- Coordination across multiple organizational levels within IHS, Tribal, and Urban health programs is critical.
- Collaboration with IHS OIT is required for all system design and implementation activities.
- Data governance, privacy, and security requirements must be maintained.
- The system should support future expansion to other syndromic surveillance activities when feasible.
- The project should align with the CDC cooperative agreement and public health surveillance modernization objectives.
- All methodologies, calculations, assumptions, caveats, and limitations must be fully documented to support long-term system sustainability and transparency.
- The Government shall have unlimited rights to all materials produced as deliverables under this contract. Unlimited rights include the right to use, modify, reproduce, release, perform, display, or disclose the data, in whole or in part, in any manner and for any purpose whatsoever, and to authorize others to do so, including Government personnel and contractors acting on behalf of the Government for purposes of operating, maintaining, supporting, modifying, or enhancing the system.
- The Contractor shall deliver all final products in formats that enable the Government to use, modify, distribute, operate, maintain, support, and enhance the deliverables independently of the Contractor. This includes, but is not limited to, source code/scripts, configuration files, data models, dashboard source files, ETL workflows, system configuration and administrative instructions, and deployment/maintenance documentation.

- The delivered materials and documentation shall be sufficient to permit the Government or a successor/support contractor, without assistance from the incumbent Contractor, to operate, administer, maintain, troubleshoot, modify, and enhance the delivered system.
- The Contractor shall identify any pre-existing, proprietary, commercial, or third-party components incorporated into the solution and any associated license or use restrictions. Such components shall not be incorporated where their restrictions would prevent the Government or a contractor acting on behalf of the Government from independently operating, maintaining, supporting, or modifying the delivered system, unless specifically approved in writing by the Contracting Officer.
- Contractor System Access: Contractor access to IHS information systems and IHS-provided software development environments is subject to applicable IHS security, onboarding, and access requirements. Contractor personnel shall promptly complete all required access documentation and requirements following award. IHS system access may require approximately 30–60 calendar days following initiation of the applicable access process.

Section 508 and Accessibility

Standards

The included standards that must be met for this contract are taken from the following two resources. Compliance with these standards is mandatory for Federal agencies subject to Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d).

- Section 508 Standards and Guidelines: <https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-ict-refresh/final-rule/text-of-the-standards-and-guidelines>
- Web Content Accessibility Guidelines (WCAG) 2.1: <https://www.w3.org/TR/WCAG21>

Electronic Content Accessibility - Non-Web Based

- 602 Support Documentation
- 603 Support Services
- All WCAG A & AA Success Criteria apply except:
 - 2.4.1 Bypass Blocks
 - 2.4.5 Multiple Ways
 - 3.2.3 Consistent Navigation
 - 3.2.4 Consistent Identification

Software Accessibility - Non-Web Based

- All WCAG A & AA Success Criteria apply – EXCEPT the following:
 - 2.4.1 Bypass Blocks
 - 2.4.5 Multiple Ways
 - 3.2.3. Consistent Navigation
 - 3.2.4 Consistent Identification
- 502 Interoperability with Assistive Technology
- 503 Application
- 602 Support Documentation
- 603 Support Services
- 302 All Functional Performance Criteria - *Note:* Applies when Chapter 5 does not address one or more functions of ICT (E204), or when an agency invokes "equivalent facilitation" (E101.2)