# Immunization Information System (IIS) Functional Model

The IIS Functional Model presents a framework and terminology for conveying and communicating the core functions, capabilities and attributes of IIS. These systems, whether as a single integrated IIS or as a set of interoperable modules, support public health immunization programs in achieving the **CDC IIS Functional Standards**\* and in providing trusted data and information to improve clinical immunization practice, increase vaccination and reduce vaccine-preventable disease.

The model also serves as a companion and index to the **IIS Baseline Requirements Traceability Matrix (RTM)**, which provides detailed requirements across IIS functions, capabilities and attributes. The RTM and other requirements tools can be found at **phii.org/iis-requirements**.

## IIS Core Functions and Capabilities

These functions and capabilities represent core functionality of IIS. Refer to the **IIS Baseline RTM** for descriptions and functional requirements associated with each.

| Administer System | Manage Organizations & Facilities | Manage Users |
|---|---|---|
| • Hierarchy configuration<br>• System configuration<br>• User roles & permissions<br>• System alerts | • Organization/facility search<br>• Add, edit, inactivate organization/facility<br>• VFC/vaccine program enrollment<br>• Organization/facility outreach | • User search<br>• Add, edit, inactivate user<br>• Authentication & authorization<br>• Password management |
| **Support Interoperability** | **Ensure Data Quality** | **Evaluate & Forecast** |
| • Onboarding<br>• Interfaces<br>• Data exchange | • Patient matching & deduplication<br>• Vaccination event matching & deduplication | • Clinical decision support<br>• Reminder/recall<br>• Coverage reports |
| **Manage Patient & Immunization Records** | **Manage Vaccine Inventory** | **Provide Data Access** |
| • Patient search<br>• Add, edit patient demographics<br>• Patient status<br>• Patient consent<br>• Add, edit patient immunization<br>• Print/export record<br>• Mass vaccination | • Vaccine inventory search<br>• Add, edit vaccine inventory<br>• Vaccine ordering<br>• Review/approve order<br>• Vaccine decrementing<br>• Vaccine inventory reconciliation<br>• Vaccine transfer<br>• Vaccine wastage<br>• Vaccine expiration | • Standard reports<br>• Print/export reports<br>• Ad hoc queries & reports<br>• Consumer access |

## IIS Attributes

These attributes represent the technical characteristics of an IIS necessary to support immunization programs and stakeholders. Refer to the **IIS Baseline RTM** for descriptions and non-functional requirements associated with each.

| Performance Efficiency | Usability | Reliability | Security | Maintainability | Portability |
|---|---|---|---|---|---|
| • Time behavior<br>• Resource utilization<br>• Capacity | • Operability<br>• User error protection<br>• Accessibility | • Availability<br>• Fault tolerance<br>• Recoverability | • Confidentiality<br>• Non-repudiation<br>• Accountability<br>• Authenticity | • Analyzability | • Adaptability<br>• Installability |

\* **https://www.cdc.gov/vaccines/programs/iis/func-stds.html**

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