



Quest and APHL AIMS Cancer Pathology Reporting Project

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Public Health Advisor

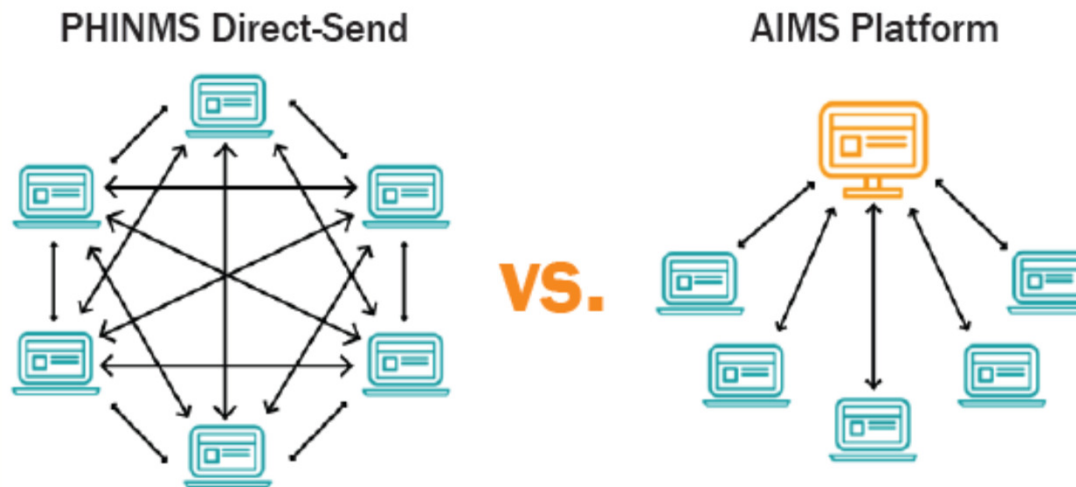
2019 NPCR Program Review Meeting
April 24, 2019



Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Division of Cancer Prevention and Control

Foundation

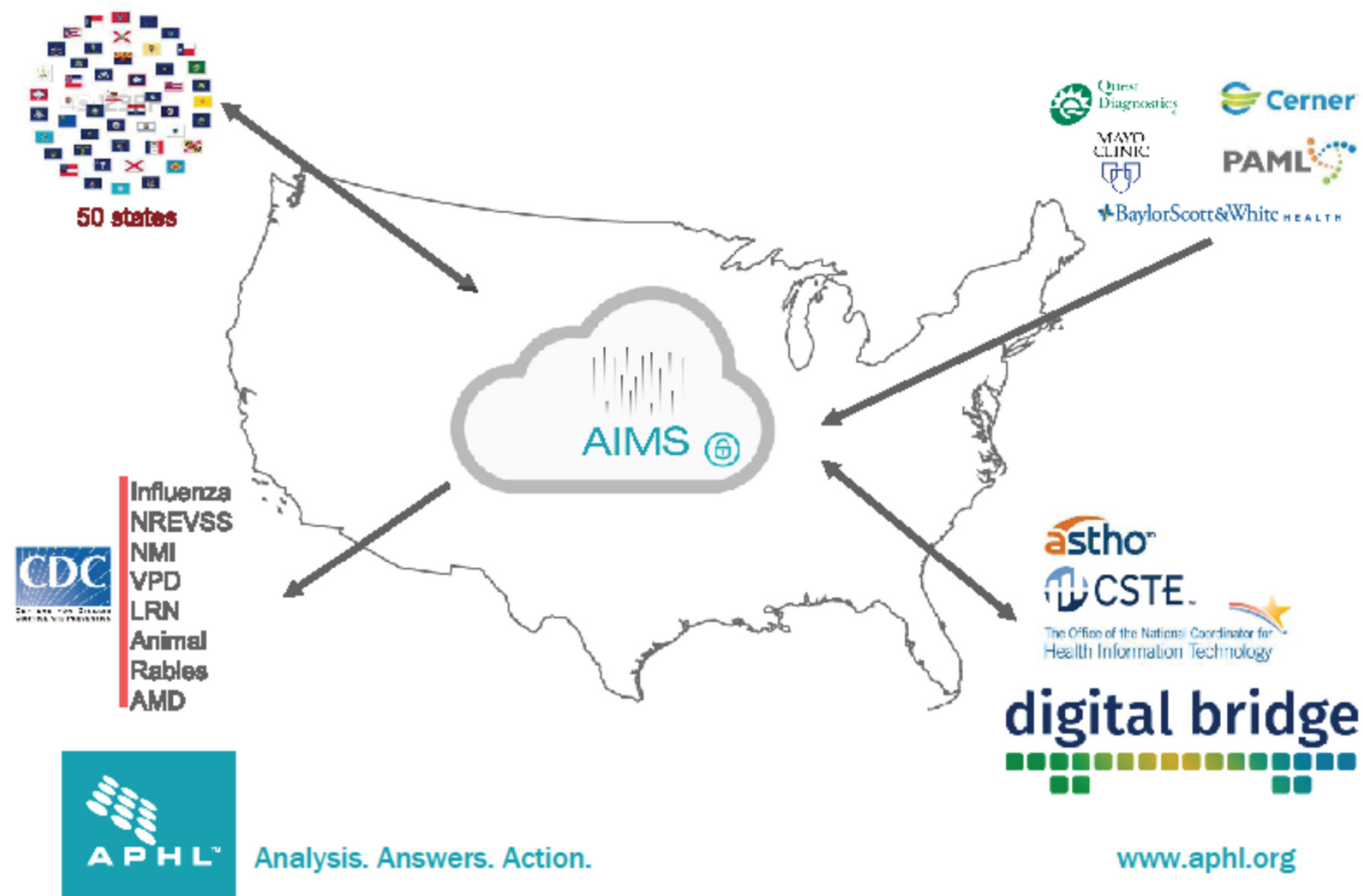
Since 2008, Association of Public Health Laboratories (APHL) has maintained a message transport hub service that has the ability to receive, hold, and transmit electronic messages sent from one organization to another. The Route-not-Read (RnR) Hub (now named APHL Informatics Messaging Services (AIMS) Platform) service routes electronic messages between the CDC, partner laboratories, and public health agencies.



APHL Informatics Messaging Services (AIMS)

A secure, cloud based environment that accelerates the implementation of health messaging by providing shared services to aid in the transport, validation, translation, transformation and routing of electronic data.

Today: A National Resource for Interoperability

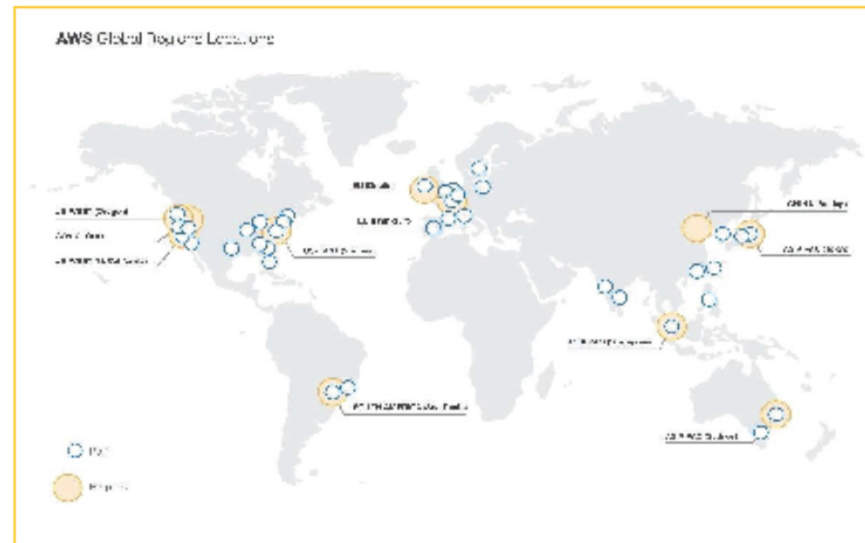


Amazon Web Services (AWS)

- Migrated to AWS on March 1, 2014
- Located in the AWS East and West US Regions
- Robust Continuity of Operations and Disaster Recovery
- Approved for GovCloud

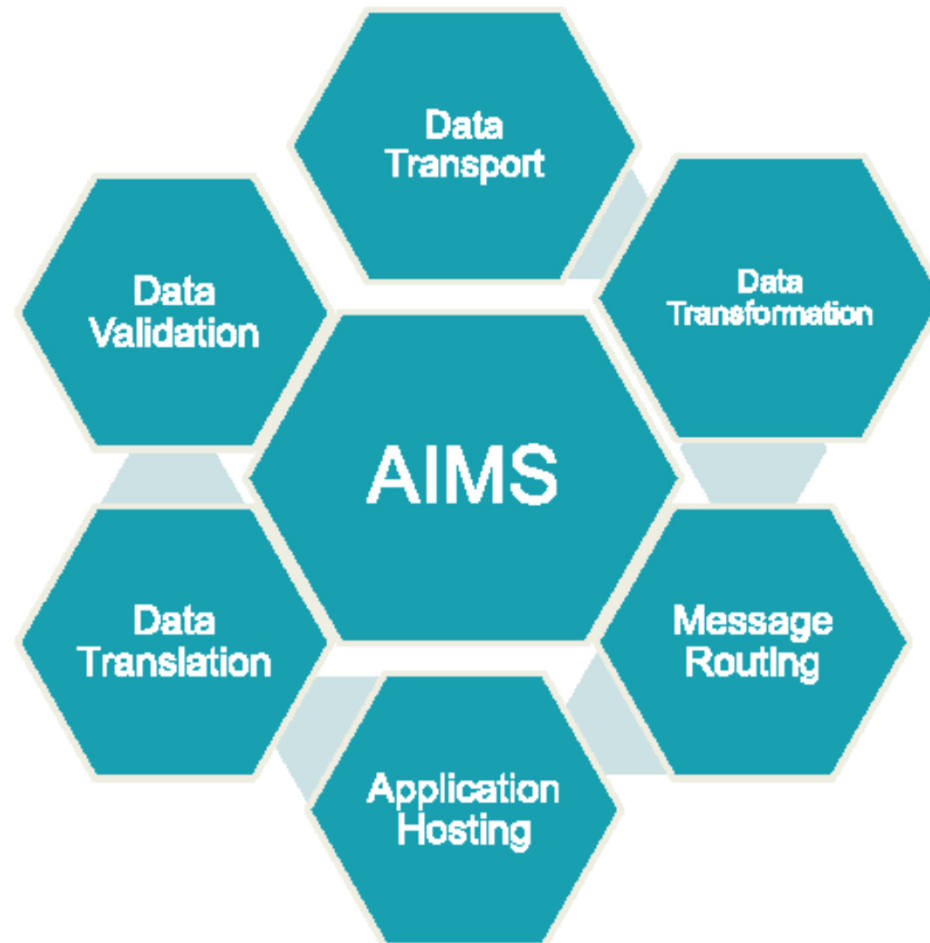


Analysis. Answers. Action.



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The High-Level Capabilities of AIMS



Compliance

- ✓ **HIPAA-compliant, HITRUST-certified environment on the AWS Cloud.**
- ✓ **Business Associate Agreements**
- ✓ **Shared Responsibility Model**
- ✓ **System Security Plan (SSP) In place**
- ✓ **Security Assessment (ST&E) and Audit conducted in 2013 and 2016.**
- ✓ **FISMA Moderate Compliance ATO granted**
- ✓ **AWS is FedRAMP certified**



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Background and Purpose

- Cancer Registries still receive paper or non-standard electronic pathology reports from many Quest Diagnostic laboratories ~ Need to receive standardized electronic cancer pathology and biomarker data
- Quest Diagnostics is a national laboratory
 - Developed and implemented a standardized Laboratory Information System called QLS
 - Currently migrated 30 regional/local laboratories to QLS and have scheduled to migrate remaining laboratories to QLS over the next 12-18 months
 - Ability to create standardized HL7 2.5.1 ORU messages from national level
 - Standardized reporting via APHL AIMS platform for all infectious diseases, HIV, vaccine preventable diseases, flu, resistant bacterial testing (including STDs), and opioids



December 7, 2018

State Department of Health ELR Contacts,
Program Directors of the CDC's National Program of Cancer Registries,
Program Directors of the National Cancer Institute's (NCI's) Surveillance, Epidemiology
and End-Results Programs

Dear Colleagues,

We are writing to update you on a promising development in efforts to implement cancer electronic pathology and biomarker (ePath) reporting in the U.S. Quest Diagnostics, The Association of Public Health Laboratories (APHL), the Centers for Disease Control and Prevention (CDC), and National Cancer Institute (NCI) are collaborating to work with jurisdictions to accelerate ePath reporting from Quest Diagnostic laboratories to public health agencies.

The first step in this project is for the CDC to work with Quest Diagnostics to develop compliant HL7 message for reporting to state cancer registries using the North American Association of Central Cancer Registries Volume V, Pathology Laboratory Electronic Reporting, Version 4.0 that is based on HL7 2.5.1. Quest Diagnostics will filter cancer cases based on the ePath "Core" ICD-10-CM code list for all state reporting and a subset of states (that have opted-in) will receive additional cancer cases based on the ePath "Expanded" ICD-10-CM code list. The ICD-10-CM codes are assigned by the pathology at the time of interpretation. A second part of the project is that the standard HL7 2.5.1 messages will be sent through the APHL Informatics Messaging Services (AIMS) platform. The AIMS platform is a secure, cloud-based environment that provides shared services to aid in the transport, validation, and routing of electronic data. The AIMS platform will enable Quest Diagnostics to send cancer cases from multiple facilities to a centralized location in the Department of Health, from which the reports will be routed automatically to federally-funded cancer surveillance programs.

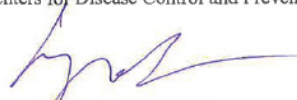
This project will focus on reporting data from Quest Diagnostics laboratories and AmeriPath/Dermpath facilities that have been converted to the Quest standard AP system. The pilot implementation will be with the Nevada Cancer Registry, then expanding to all other state cancer registries.


We – Quest Diagnostics, APHL, CDC, and NCI– look forward to working with you on this project to implement Quest Diagnostics Cancer ePath Reporting to all state cancer registries. Please contact Temitope Alimi at nyj4@cdc.gov with any questions / concerns or interest in being the next participant for this project.

Sincerely,

Vicki Benard

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Lynne Penberthy, MD, MPH
Associate Director
Surveillance Research Program
Division of Cancer Control and Population Sciences
National Cancer Institute


E. Michael Kramer, MD
Vice President of Pathology and Medical Services
Quest Diagnostics

Quest Cancer Reporting ~ APHL AIMS

- Use existing APHL AIMS portal with State Departments of Public Health ~ faster and cheaper
 - Business/Data Sharing Agreements already in place to cover data exchange between APHL and State Departments of Health
 - Cancer registry to coordinate with State Department of Health contact(s) to plan for data exchange
- If use of existing portal will not work, then...
 - State Department of Health designee (University-based Cancer Registry, Health Information Exchange, etc.) will need to go through legal process to setup a Business/Data Sharing Agreement with APHL/Quest

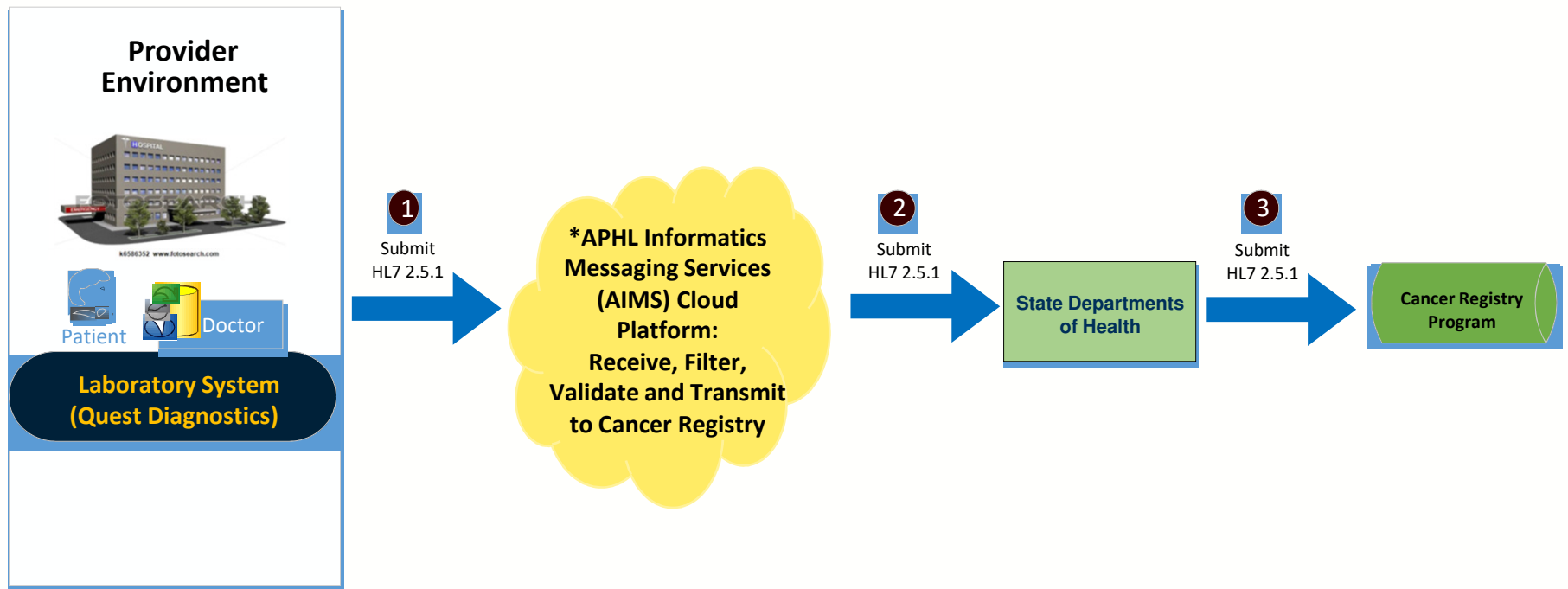
Quest Cancer Reporting ~ APHL AIMS

- MSH-10 field will be used to identify the type of case
- State Department of Health to decide if cancer data will be sent separate from other data feeds; APHL-AIMS will provide tool for states to batch reports if desired
- Implementation of cancer case identification filter using ICD-10-CM CORE and EXPANDED reportability lists
 - Future enhancement will implement Artificial Intelligence/Natural Language Processing (AI/NLP) tool or service to identify reportable cases

Quest Cancer Reporting ~ APHL AIMS

- Quest development of a compliant HL7 2.5.1 ORU message (including SPM segment) for reporting to central cancer registries according to the NAACCR Volume V version 4.0 Pathology Laboratory Electronic Reporting specification
- Configure the AIMS platform, Message Tracker and Dashboard to be able to receive, batch, validate and route cancer registry data based on requirements established
- Pilot transmission of cancer pathology and biomarker data through the AIMS Platform to Nevada and California Cancer Registries
 - Expand reporting to all central cancer registries

Quest Cancer Data Flow Using APHL AIMS Platform



*APHL: Association of Public Health Laboratories

Benefits of Using APHL AIMS Platform

- Laboratories and Central Registry only need to manage connection with the APHL AIMS platform to report and receive data
- Supports multiple transport protocols: PHINMS, NwHIN, AWS S3, and sFTP
- Provides a dashboard to track data through the entire data exchange process to track issues and confirm data were received by authorized agencies
- Provides tools and services for Central Cancer Registries:
 - Batch cancer reports for processing
 - Quest/APHL to validate data before transmitted to state

Future Use of APHL-AIMS Platform

- Host services and tools for use by laboratories and cancer registries :
 - Web service or API to identify reportable cases using AI/NLP
 - Serve as Form Manager for laboratory information system vendors to request College of American Pathologists Cancer Checklists for pathologists to complete specific forms
- Implement additional laboratory reporting using this platform ~ already have several laboratories requesting this type of reporting interface with cancer registries
- For more information on APHL AIMS Platform visit:
<http://aimsplatform.com>

Contacts

- Sandy Jones, sft1@cdc.gov, 770-488-5689
- Temitope (Temi) Alimi, nyj4@cdc.gov, 404-498-5312
- Barb Weatherby, wwj8@cdc.gov, 360-754-8790

Thank you!

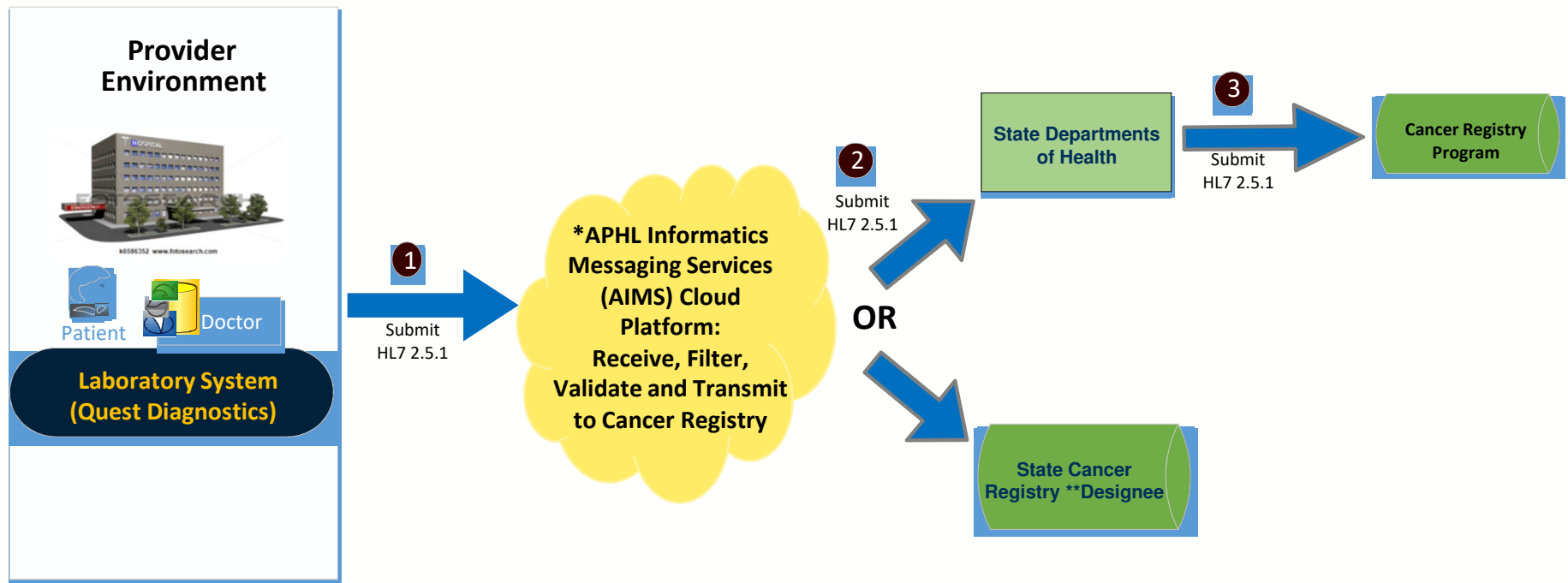
Go to the official federal source of cancer prevention information:
www.cdc.gov/cancer



Division of Cancer Prevention and Control
Reliable. Trusted. Scientific.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Quest Cancer Data Flow Using APHL AIMS Platform



*APHL: Association of Public Health Laboratories

** Designees can be a University, Health Information Exchange, or Department of Health Contractor