



The Office of the National Coordinator for
Health Information Technology

Exploring the Certified Health IT Product List (CHPL): Data Findings and Applications

ONC Annual Meeting
November 30, 2018

Wes Barker, Program Analyst, ONC
Papia Paul, Public Health Analyst, ONC



ONC Health IT Certification Program

- ONC's Health IT Certification Program launched in 2010.
- Voluntary certification program established to provide for the certification of health IT standards, implementation specifications, and certification criteria adopted by HHS.
- Provides assurance to purchasers and other users that a system meets the technological capability, functionality, and security requirements adopted by HHS.
- Program supports the availability of certified health IT for its encouraged and required use under other federal, state, and private programs.



ONC's Certified Health IT Product List (CHPL)

- The ONC CHPL is the authoritative, comprehensive listing of all health IT products that have been tested and certified under the ONC Health IT Certification Program.

<https://chpl.healthit.gov>

- Health IT products are listed on the CHPL after eligible components have been successfully tested by an ONC Authorized Testing Laboratory (ONC-ATL) and certified by an ONC Authorized Certification Body (ONC-ACB).
- The CHPL contains data on certified health IT that includes information on:
 - » Certification criteria to which the health IT has been certified
 - » Usability testing results
 - » Non-conformities, including any surveillance activities and their corrective action plans/resolution

Open CHPL

- ONC compiles information submitted from ONC-Authorized Certification Bodies (ONC-ACBs) to generate the data on the CHPL.
 - » In the past, much of the data on testing and certification was provided in unstructured documents.
- In 2016, CHPL's design updated in order to allow users to have better access to the data in structured, discrete formats.
 - » Note, only the 2015 Edition certified health IT products would have **complete** data available in these structured formats.
- All the data is viewable directly on the CHPL website.
 - » For users who want greater access to the data, the CHPL has APIs and downloadable XML files containing the complete data available.

Accessing the CHPL Data

- **Downloadable Data** [<https://chpl.healthit.gov/#/resources/download>]
 - » The full data for each edition (2011, 2014 and 2015) are available as XML.
 - » Select data fields are available for 2014 and 2015 Editions in CSV.
 - » Surveillance data are available in CSV.
 - » Documentation or definition files are available for each downloadable dataset.
- **APIs** [https://chpl.healthit.gov/#/resources/chpl_api]
 - » APIs are available to directly connect your application or software to the CHPL data.
 - » Registration is required to use the APIs.
 - » Registration provides you a unique API Key, which is required to query the APIs.

CHPL Downloadable Data

- **XML**

- » Each unique node in the XML is called <listing>. A listing is each unique certified product version. A unique product may have more than one listing (or version), and a unique developer may have more than one product (and, therefore, more than one listing).
- » Each <listing> contains all data related to the certificate.
 - Aside from the basic metadata, each listing includes certification results, testing results, relied upon software, clinical quality measures and standards used for each health IT module.

- **CSV**

- » Each row of the CSV represents a unique listing (as defined above). The CSV provides the high level details of each listing, but does not include more granular information like testing results, relied upon software and standards.
- » The downloadable surveillance data includes all information on surveillance results, including surveillance results, corrective actions plans (CAP) and CAP status.

CHPL APIs

- **The CHPL APIs are web-based and return data in a JSON structured format.**
 - » All public users can perform GET requests for each publicly available API, meaning you can perform a query of the CHPL database and return a set of data in JSON based upon that query.
 - » The CHPL API webpage [https://chpl.healthit.gov/#/resources/chpl_api] includes documentation for each API, release notes shared on GitHub and a sample Java application that uses the CHPL API.
 - » Some APIs don't return a JSON structured dataset. For example, the /download API can be used to programmatically download the downloadable XML datasets.

CHPL Data Challenge



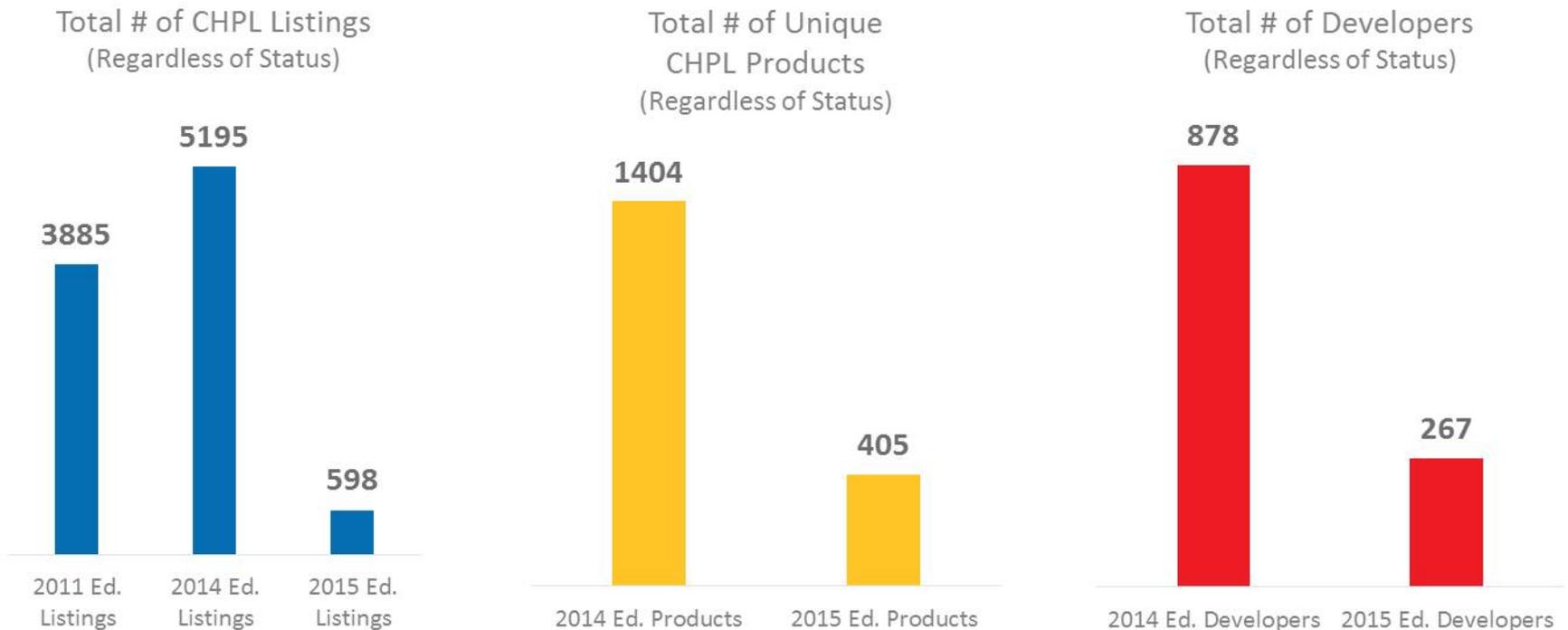
Develop a software application that makes use of the data in the CHPL application programming interfaces (APIs) or XML files in novel ways.

Challenge Requirements

- <https://www.cccinnovationcenter.com/challenges/chpl-data-challenge/>
- **Winners will be selected based on the following criteria:**
 - » Software application's adherence to the requirements
 - » Software application's use of data from the CHPL
 - » Software application's value in identifying and solving a problem in health care or health IT
 - » Creativity in problem solving of key health care or health IT issues
 - » Ease of use, user-friendliness, best practices
- **Winners will be announced soon!**
 - » \$40,000 in prizes

Putting the CHPL Data in Context

- There are thousands of listings of certified health IT products in the CHPL. However, those listings represent many different versions of products from many different developers.



- These products are used by a wide range of health care providers with large variation in the number of providers who use each product.

Market Data Meets CHPL Data

- 2015 Edition Market Readiness for Hospitals and Clinicians
 - » <https://dashboard.healthit.gov/quickstats/pages/2015-edition-market-readiness-hospitals-clinicians.php>
- It's important to use market data to contextualize CHPL data.
 - » Understand impact of rulemaking
 - » Model impact on market of individual certifications
 - » Provide insights on market changes
- Market data allows us to quantify and visualize the adoption of FHIR in 2015 Edition certified health IT.

Heat Wave Blog

Objective: Estimate the availability of FHIR across EHRs currently used by hospitals and office-based practices nationwide.

- Blog post: <https://www.healthit.gov/buzz-blog/interoperability/heat-wave-the-u-s-is-poised-to-catch-fhir-in-2019/>
- Full 10/17 presentation to Health IT Advisory Committee: https://www.healthit.gov/sites/default/files/facas/2018-10-17_HITAC_FHIR_Presentation_508.pdf
- ONC reviewed the API documentation for all 2015 Edition products certified to 170.315(g)(8) (“Application access-data category request”) to determine the syntax of the certified API.
 - » Documentation is available on developers’ public websites.
 - » Links to documentation (webpages and PDFs) are available on the CHPL: <https://chpl.healthit.gov/#/collections/apiDocumentation>.
 - » Documentation was reviewed by ONC staff to determine the syntax of the certified API. It was determined whether the API used FHIR (release 2 or 3), a non-FHIR RESTful API, or Other API.

Public API Documentation Data

- API Information for 2015 Edition Products
 - » <https://chpl.healthit.gov/#/collections/apiDocumentation>
- This list includes all health IT products that have been certified to at least one of the following API Criteria:
 - » §170.315 (g)(7): Application Access - Patient Selection
 - » §170.315 (g)(8): Application Access - Data Category
 - » §170.315 (g)(9): Application Access - All Data Request
- The API Documentation Data documents the API syntax and authorization standard used for all 2015 Edition certified APIs.
 - » The data will capture, over time, changes in API documentation and provide a transparent method to share ONC's work to document 2015 Edition certified APIs.

Surveillance Data

- ONC-ACBs must report, at a minimum, the results of their surveillance on a quarterly basis, and these results are reported to the CHPL.
- A certified product is non-conforming if, at any time, an ONC-ACB or ONC determines that the product does not comply with a requirement of certification.
 - » Note: Not all non-conformities affect a product's functionality, and the existence of a non-conformity does not by itself mean that a product is "defective."
- **Surveillance Activity:** Entire collection of surveillance activity reported to the CHPL. Available as a CSV file.
- **Non-Conformities:** Collection of surveillance activities that resulted in a non-conformity. This is a subset of the data available in the above "Surveillance Activity" file. Available as a CSV file.

Resources

- CHPL: <https://chpl.healthit.gov>
- CHPL Overview: <https://chpl.healthit.gov/#/resources/overview>
- CHPL Public User Guide:
https://www.healthit.gov/sites/default/files/policy/chpl_public_user_guide.pdf
- CHPL Downloadable Data: <https://chpl.healthit.gov/#/resources/download>
- CHPL APIs: https://chpl.healthit.gov/#/resources/chpl_api
- API Information for 2015 Edition Products:
<https://chpl.healthit.gov/#/collections/apiDocumentation>
- ONC Health IT Certification Program FAQs:
<https://www.healthit.gov/topic/certification-ehrs/frequently-asked-questions>

Questions?



The Office of the National Coordinator for
Health Information Technology



THANK YOU!

Wes Barker

Wesley.Barker@hhs.gov

Papia Paul

Papia.Paul@hhs.gov

Health IT Feedback Form:

<http://healthit.gov/healthit-feedback>



@ONC_HealthIT



@HHSOnc

