

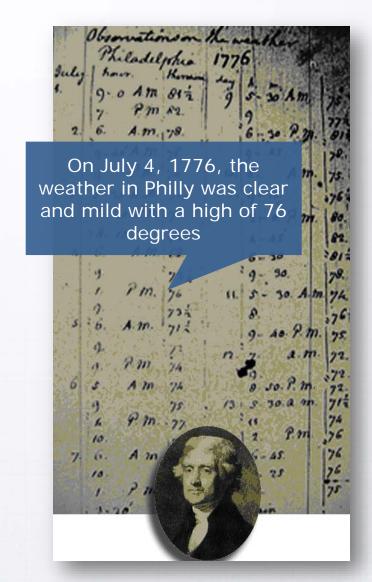
Connecting Dots

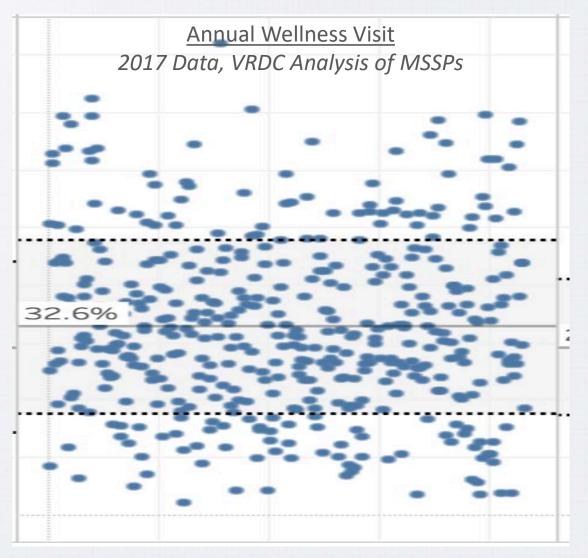
How Open Data, APIs and Payment Reform will Fuel Care Delivery Reform

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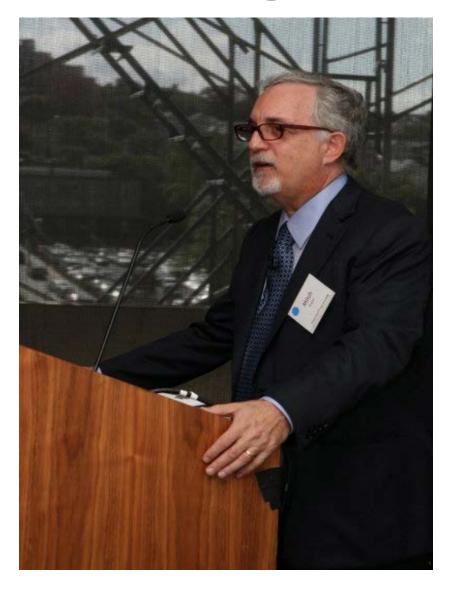
Open Data as Infrastructure







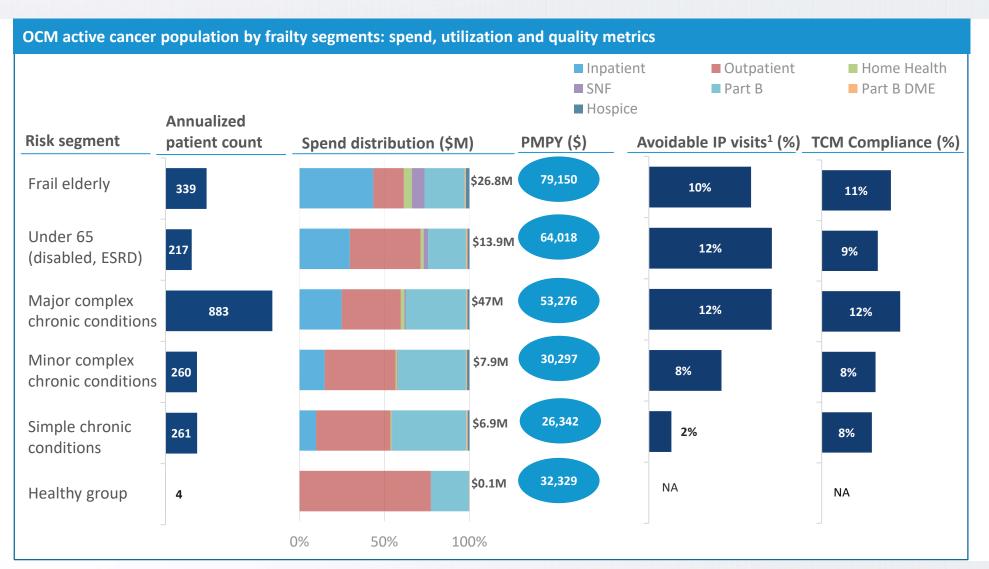
Entering the "Health Internet" Era



In a 10/09 speech, Kapor called for a "health internet," a less complex, more open, "light federal approach" that would encourage an early critical mass of users to participate; PCAST added the need for a "universal exchange language" in 2010 report



Payment Reform Re-Shaping Care Delivery





Bipartisan Regulation on Data Sharing



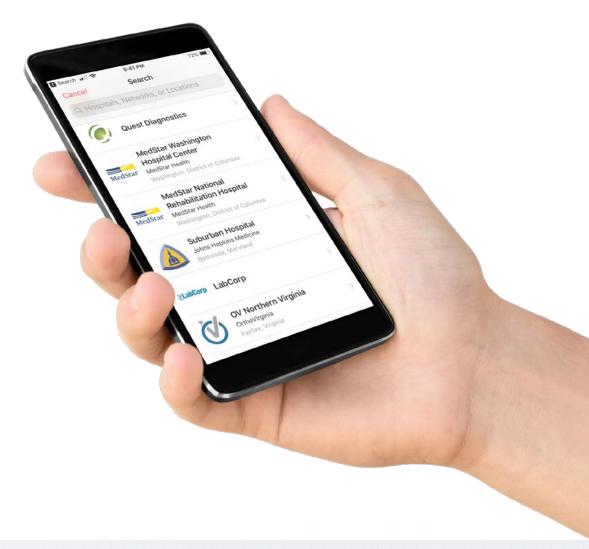
- 1 Consumer Directed Exchange the preferred "HIE" method
- 2 "Net Neutrality"-like approach to "B2B" data access pricing
- 3 Government-sponsored Plans under new obligations to share data
- 4 Hospitals under new obligations to share discharge notifications
- 5 FHIR "Accelerators" to set pace of meeting CMS challenge to API-enable HIPAA "designated record set"



Consumer Directed Exchange Scaling

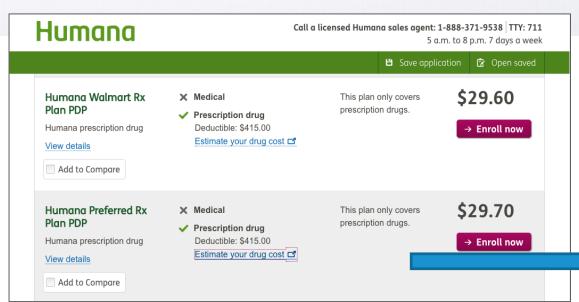
A growing list of healthcare institutions support health records on iPhone, enabling you to view important data such as immunizations, lab results, medications, and vitals directly in the the Health app.

| Objective | Performance | Exclusion |
|----------------------------------|-------------|-----------|
| E-copy of health information | 93% | 54% |
| E-copy of discharge instructions | 93% | 53% |





CMS "First to Market" on Claims APIs



Sign in to MyMedicare.gov to co Enter your User name and Password and sign in to MyMedicare.gov to continue. User name BBUser29999 Password By accessing this system, you agree to our Terms and Conditions. Read more + Sign In Cancel Trouble Signing In? New To MyMedicare.gov? Create an Account Online Services/Web confidentiality agreement

Humana.

Using Medicare's Blue Button 2.0, we can quickly transfer your prescription info and estimate your drug costs.

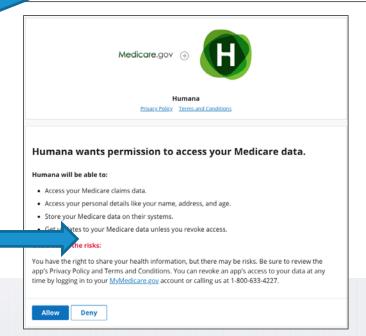
Blue Button 2.0 securely connects Humana with up to four years of your Medicare Parts A, B and D claims data. Your prescription list will be built using your current year of data. You have full control over how your protected health information (PHI) can be used. Your identity and authorization are controlled through tools on MyMedicare.gov.

Note: because this involves PHI, only the potential plan member can complete this.

Let's connect you to MyMedicare.gov to price your prescriptions!

Yes, connect to MyMedicare.gov

No, I'd rather enter my prescriptions manually →





"Net Neutrality" Approach to API Fees

A QUICK REMINDER

What is net neutrality?

All traffic on the internet should be treated equally.

NO BLOCKING

Your internet access provider (IAP) cannot block you from accessing legal content of your choice.

NO THROTTLING Your IAP cannot intentionally throttle legal internet traffic to slower speeds than other traffic.

NO PAID PRIORITIZATION

Your IAP cannot sell 'fast lane' service to content providers who can pay more than others.

The API Conditions of Certification Openness and Pro-Competitive Conditions

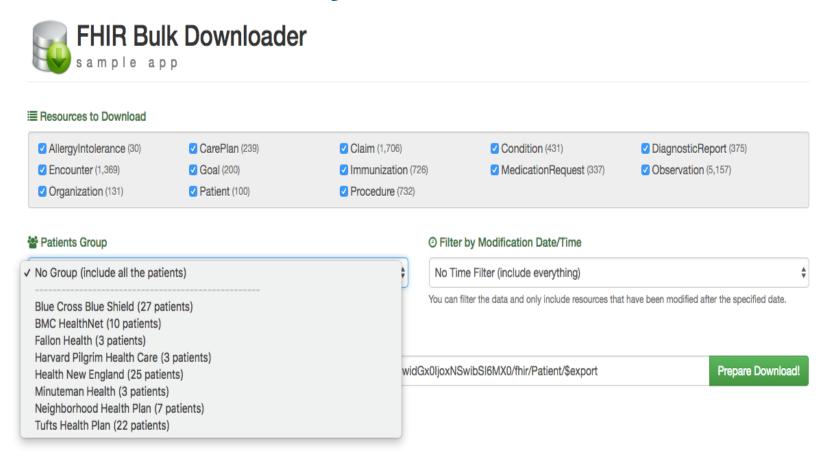
- This permitted fee <u>DOES NOT</u> include:
 - Any costs incurred by the API Technology Supplier to support uses of the API technology <u>that</u> <u>facilitate a patient's ability to access, exchange, or</u> use their electronic health information.
 - Costs associated with intangible assets (including depreciation or loss of value), except the actual development or acquisition costs of such assets.
 - Opportunity costs, except for the reasonable forward-looking cost of capital.

An API Technology Supplier must grant an API Data Provider the sole authority and autonomy to permit API Users to interact with the API technology deployed by the API Data Provider.



Extending Applications for "Bulk" Use

Beneficiary Claims Data API





Directing Rx Pricing at Point of Care

EHR Med Order

Toprol XL R 50 mg daily

EHR triggers a CDS hook and invokes a remote service

CDS Services

CDS Service executes its' own rules, leveraging FHIR data as needed

information card

\$200 per month (patient pays \$30)

suggestion card

Try HCTZ as first-line

Switch to HCTZ

smart app link card

Managing hypertension? Launch JNC 8 Rx Pro

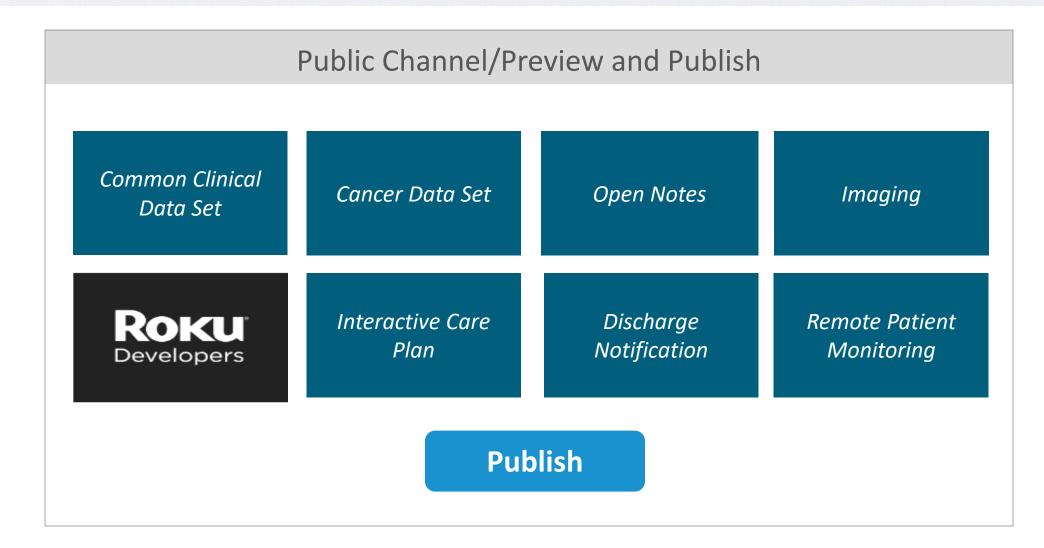
Returns CDS cards (rendered and displayed by EHR)

EHR FHIR Server

CMS is proposing that each Part D plan adopt a provider (i.e. EHR-integrated) RTBT of its choosing beginning on or before January 1, 2020



Healthcare's Roku Moment





Launch FHIR "Accelerators" for Pharma

CMS' CAR-T Covered Decision (2/19)

"The furnishing hospital shall address the CED questions on all registry patients by tracking the following clinical data elements at baseline, at treatment, and at follow-up 3 months, 6 months, 12 months, and 24 months after the treatment is administered.

- * Age, gender and comorbidities;
- * specifics of cancer diagnosis (e.g., subclassification, stage);
- * number(s) or line(s) of previous therapies, therapeutic agents previously administered;
 - * days to disease progression;
 - * days to recurrence;
 - * overall survival; and
 - * progression-free survival."

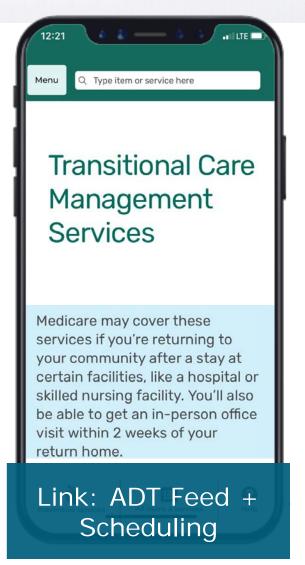








First Focus on Linked (Not Big) Data



Q Type item or service here Yearly "Wellness" visits If you've had Medicare Part B (Medical Insurance) for longer than 12 months, you can get a yearly "Wellness" visit once every 12 months to develop or update a personalized prevention plan. Link: Care Plan open

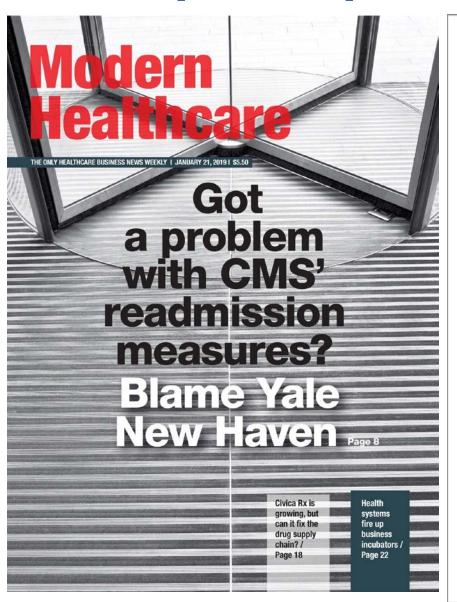
data standard

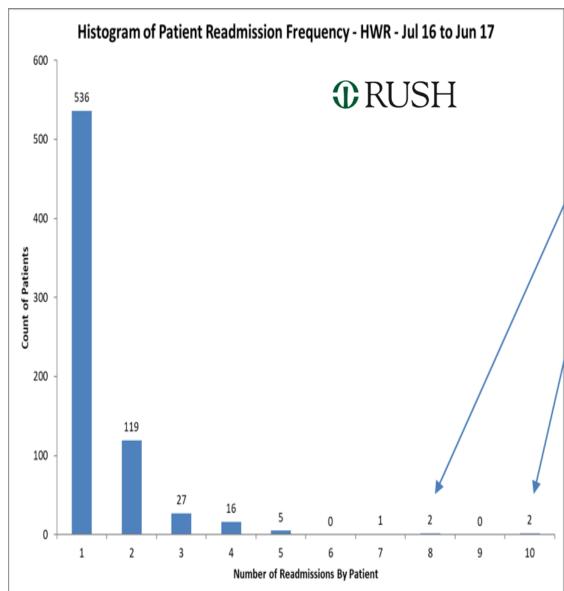


Link: Clinical Data Set + Supplier Database



Require Open Science for Feedback Loops





- 2 patients with 8 readmissions each
- 2 patients with 10 readmissions each



Health Information Fiduciaries

