A Leadership Moment:

A Special Briefing on COVID-19 & Interop Regulations

Aneesh Chopra
@aneeshchopra

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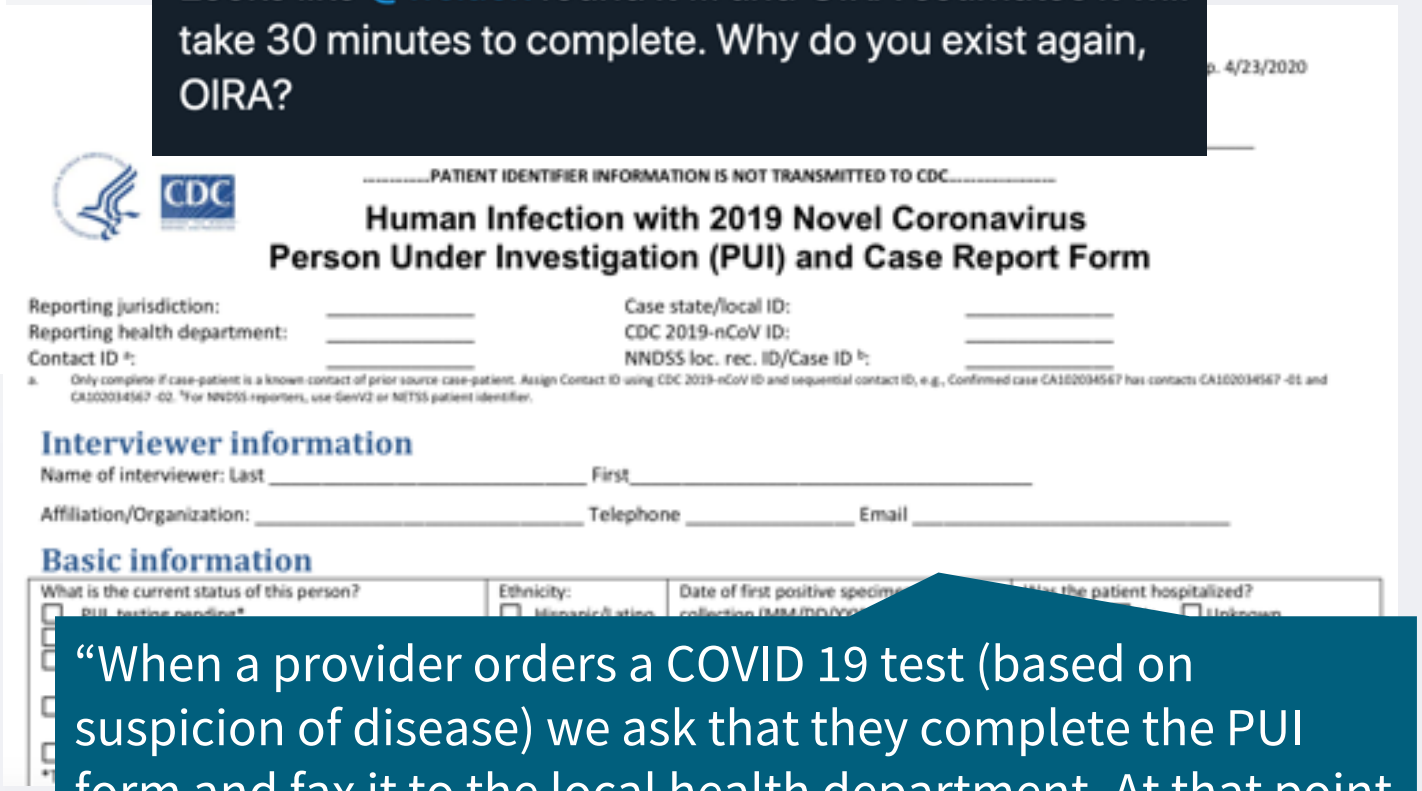
A Hunch Analytics Company

COVID-19 a National Moment for Change



"When a provider orders a COVID 19 test (based on suspicion of disease) we ask that they complete the PUI form and fax it to the local health department. At that point it gets transcribed into a REDcap database so that we can track testing and results." – State Public Health official

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“All Hands on Deck” on COVID Response

1 Trusted, Open Data

#SEO for COVID Information

#Real-Time Surveillance Data

#“Heat-Mapping” Risk Factors

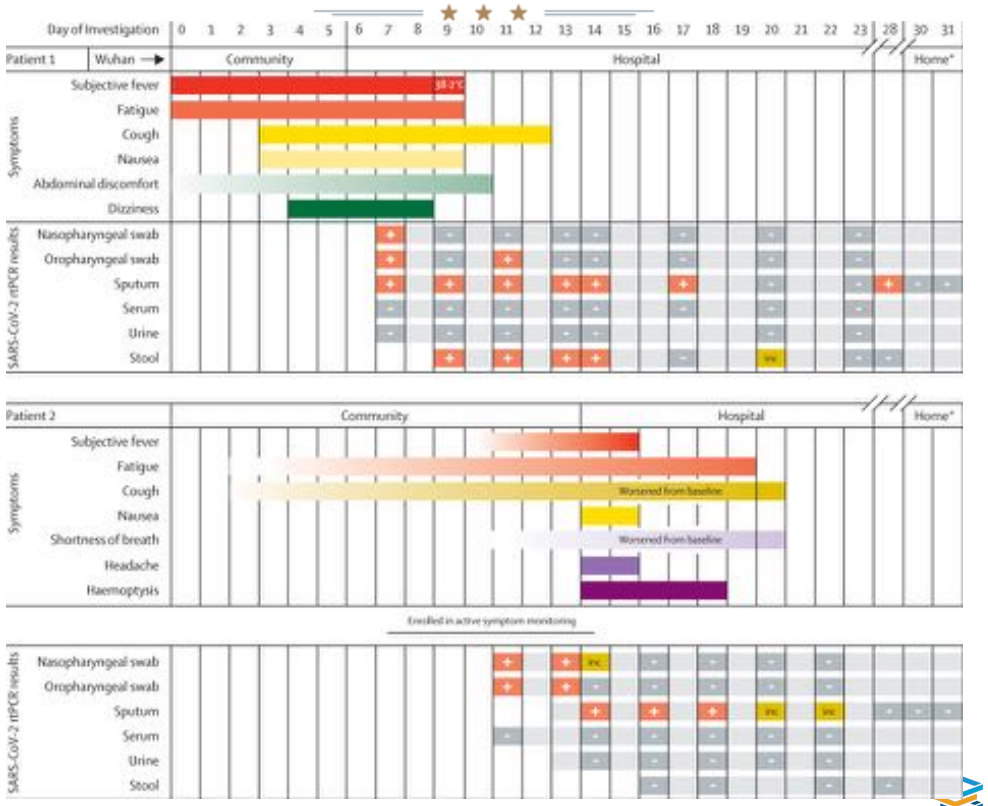
2 Automating Public Health Reporting

3 Longitudinal COVID Patient Registry

STATEMENTS & RELEASES

Call to Action to the Tech Community on New Machine Readable COVID-19 Dataset

HEALTHCARE | Issued on: March 16, 2020



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Open Web Standards for Testing, More

schema blog

Official blog for schema.org

MONDAY, MARCH 16, 2020

Schema for Coronavirus special announcements, Covid-19 Testing Facilities and more

The COVID-19 pandemic is causing a large number of "Special Announcements" pertaining to changes in schedules and other aspects of everyday life. This includes not just closure of facilities and rescheduling of events but also new availability of medical facilities such as testing centers.

We have today published Schema.org 7.0, which includes fast-tracked new vocabulary to assist the global response to the Coronavirus outbreak.

It includes a "SpecialAnnouncement" type that provides for simple date-stamped textual updates, as well as markup to associate the announcement with a situation (such as the Coronavirus pandemic), and to indicate URLs for various kinds of update such a school closures, public transport closures, quarantine guidelines, travel bans, and information about getting tested.

Many new testing facilities are being rapidly established worldwide, to test for COVID-19. Schema.org now has a CovidTestingFacility type to represent these, regardless of whether they are part of long-established medical facilities or temporary adaptations to the emergency.

We are also making improvements to other areas of Schema.org to help with the worldwide migration to working online and working from home, for example by helping event organizers indicate when an event has moved from having a physical location to being conducted online, and whether the event's "eventAttendanceMode" is online, offline or mixed.

We will continue to improve this vocabulary in the light of feedback (github; doc), and welcome suggestions for improvements and additions particularly from organizations who are publishing such updates.

Dan Brickley, R.V.Guha, Google.
Tom Marsh, Microsoft.

Physician All (1)

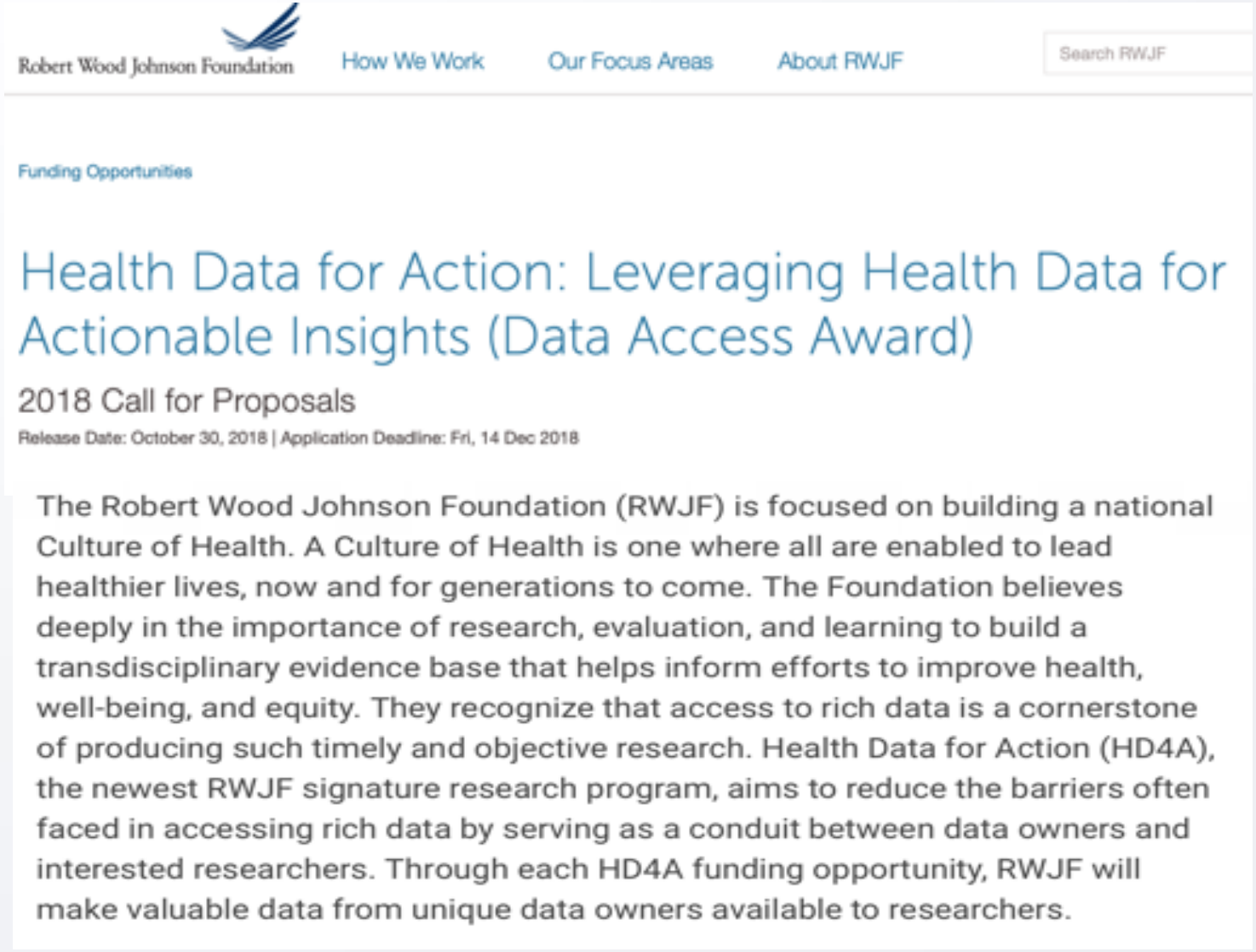
Physician	PREVIEW	0 ERRORS	1 WARNING
@type	Physician		
image	https://s3.amazonaws.com/appdev-photo-storage-production/provider/kyruus/1669492336.png		
description	Charles Yeo, MD is a physician at Jefferson Health.		
name	Charles Yeo		
url	https://hospitals.jefferson.edu/find-a-doctor/y/yeo-charles-j.html		
telephone	1-800-JEFFNOW		
award	Phil…azine's Top Docs		

Updated schema.org allows for "SpecialAnnouncement" and "CovidTestingFacility" documentation on health system websites. Providers marking up their sites allows for streamlined, trusted data compilation and trusted sites can be whitelisted and crawled for real-time data compilation. http://blog.schema.org/2020/03/schema-for-coronavirus-special.html

…PEBTF)

…eJourney

Open Aggregate Data on COVID Cases



Robert Wood Johnson Foundation How We Work Our Focus Areas About RWJF Search RWJF

Funding Opportunities

Health Data for Action: Leveraging Health Data for Actionable Insights (Data Access Award)

2018 Call for Proposals

Release Date: October 30, 2018 | Application Deadline: Fri, 14 Dec 2018

The Robert Wood Johnson Foundation (RWJF) is focused on building a national Culture of Health. A Culture of Health is one where all are enabled to lead healthier lives, now and for generations to come. The Foundation believes deeply in the importance of research, evaluation, and learning to build a transdisciplinary evidence base that helps inform efforts to improve health, well-being, and equity. They recognize that access to rich data is a cornerstone of producing such timely and objective research. Health Data for Action (HD4A), the newest RWJF signature research program, aims to reduce the barriers often faced in accessing rich data by serving as a conduit between data owners and interested researchers. Through each HD4A funding opportunity, RWJF will make valuable data from unique data owners available to researchers.

Variables for COVID-19 Positive Cases

Age and sex
Living in long-term care facility or nursing home
Chronic lung disease, including asthma
CHF, CAD, or other common heart condition
Diabetes mellitus
Neurologic conditions (particularly neuromuscular that inhibit ability to cough)
Chronic liver disease, including cirrhosis
Severe obesity (BMI≥40)
Chronic kidney disease on dialysis
Immunocompromised
Pregnancy
Severity indicator
Other common conditions in COVID patients

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“Heat-Mapping” At-Risk Populations

Viewpoint

ONLINE FIRST FREE

February 24, 2020

Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China

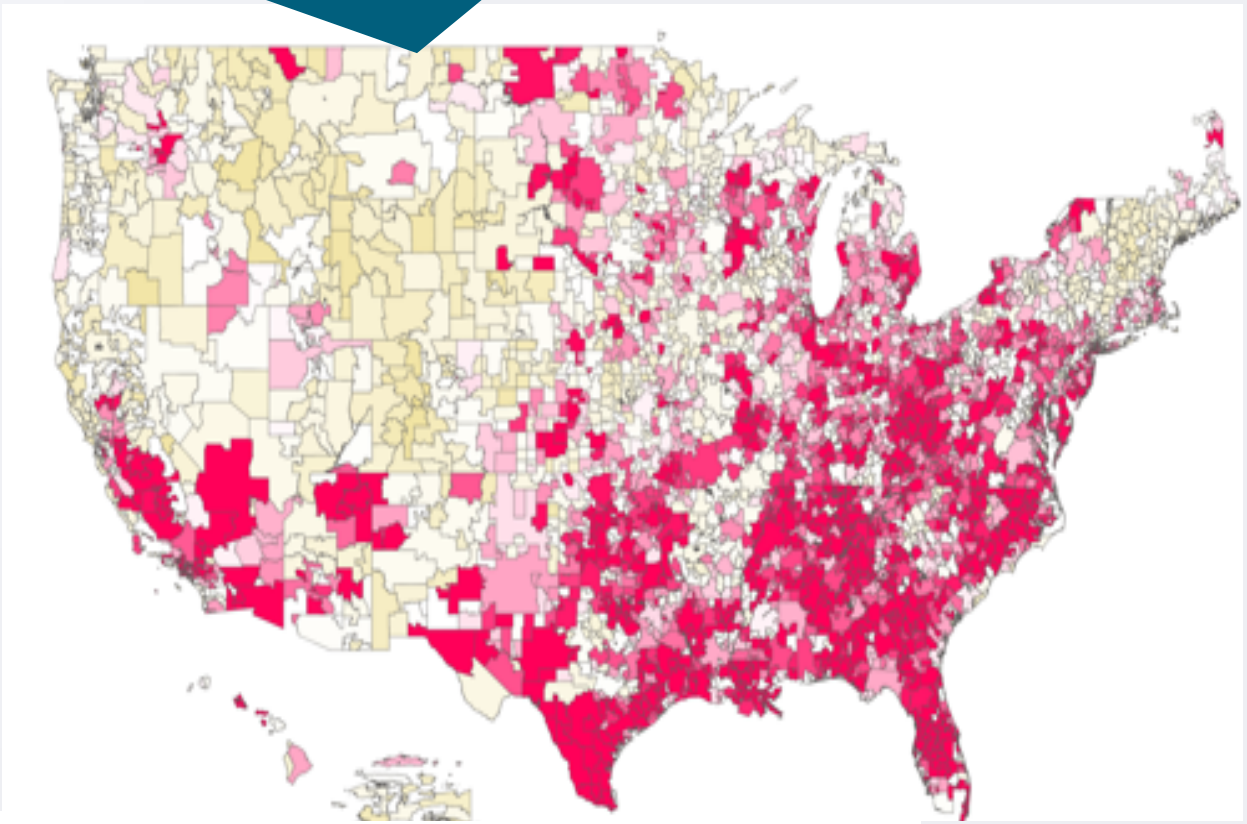
Summary of a Report of 72314 Cases From the Chinese Center for Disease Control and Prevention

Zunyou Wu, MD, PhD[1]; Jennifer M. McGoogan, PhD[1]

» Author Affiliations | Article Information

JAMA. Published online February 24, 2020. doi:10.1001/jama.2020.2648

Which regions of the US appear to have the greatest vulnerability suffering extreme illness and death if/when exposed sufficiently to COVID-19, based on early predicators of risk?



County, hospital servicing area (HSA) and zip code level prevalence of early risk predictors of COVID-19, including but not limited to being aged 65+, residing in a long-term care or nursing home, and having multiple of the following chronic conditions: chronic lung disease, diabetes mellitus, chronic kidney disease, heart & vascular diseases and cancer

1 Wu, Z., & Mcgoogan, J. M. (2020). Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China. *Jama*. doi: 10.1001/jama.2020.2648

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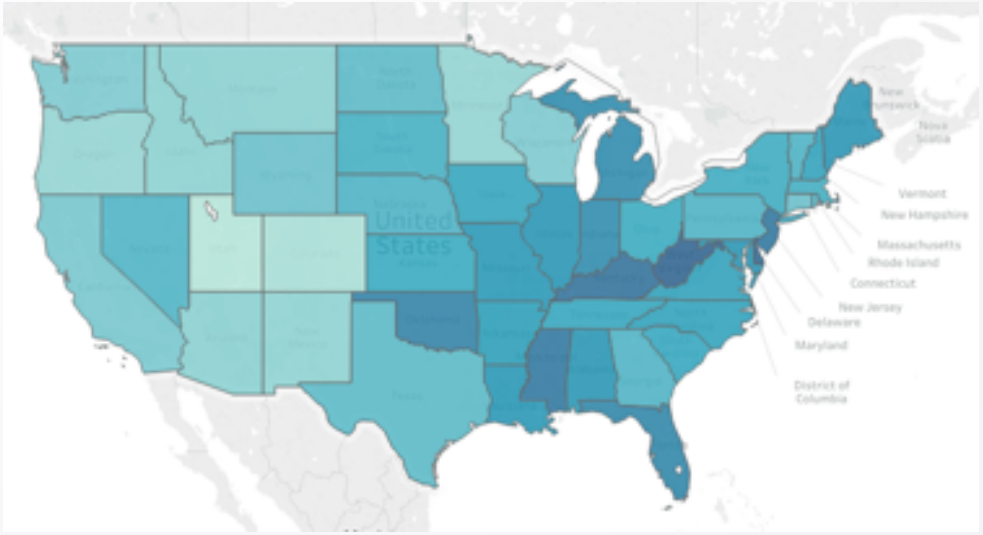
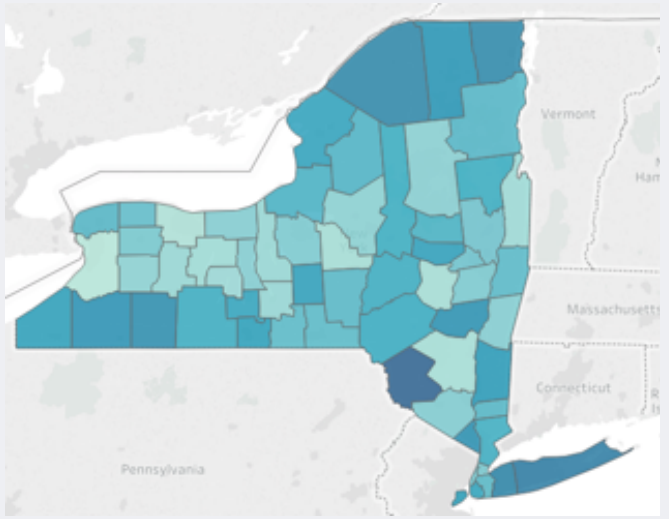
“Drill-Down” on High-Risk Geographies



Utilize beneficiary zip code in claims data to identify outlier geographic clusters

Leverage Census data to create ratio of beneficiaries w/ 4+ of the conditions to total population of an area



Top Ten Counties by Ratio of Beneficiaries w/ 4+ of the Conditions to Total Population (min. population of 100,000)

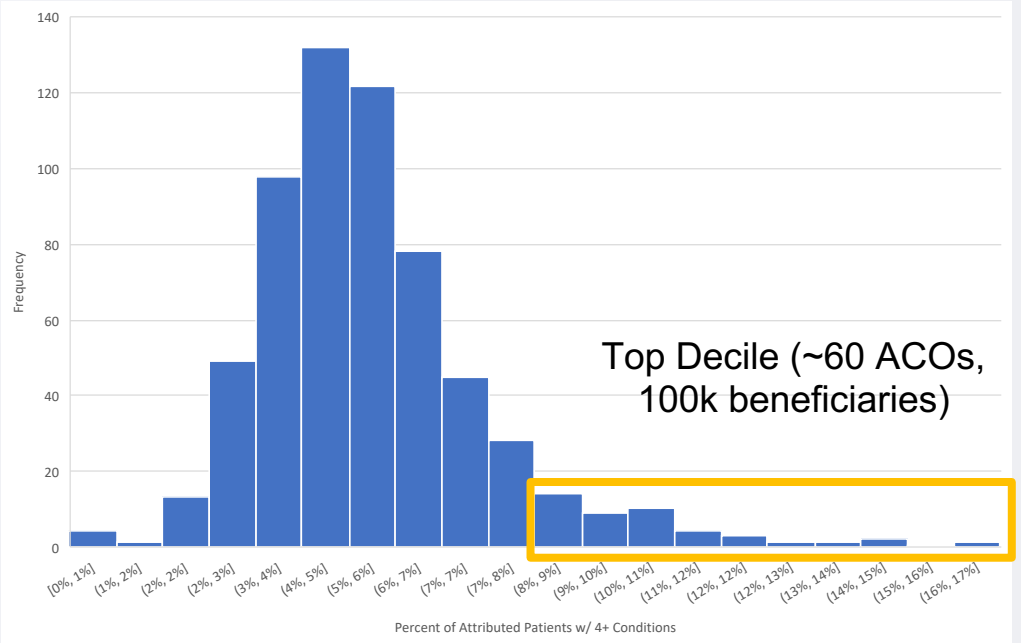
County	CBSA	State	Count Beneficiaries w/ 4+ of the Conditions	Percent Beneficiaries w/ 4+ of the Conditions
Sumter County	All Rural Florida	Florida	2,134	1.97%
Citrus County	All Rural Florida	Florida	2,152	1.54%
Charlotte County	Punta Gorda, FL CBSA	Florida	2,498	1.51%
Ocean County	New York-Northern New Jersey-Long Island	New Jersey	8,452	1.45%
Lake County	Orlando-Kissimmee, FL CBSA	Florida	4,428	1.43%
Sussex County	All Rural Delaware	Delaware	2,659	1.28%
Marion County	Ocala, FL CBSA	Florida	4,109	1.22%
Grayson County	Sherman-Denison, TX CBSA	Texas	1,440	1.17%
Vigo County	Terre Haute, IN CBSA	Indiana	1,259	1.16%
Macon County	Decatur, IL CBSA	Illinois	1,258	1.15%

Member Service: ACO Network Drill-Downs

Set out to identify outlier clusters of patients with at least 4 of 5 early indicating risk predictors[1]

Utilized 100% Medicare FFS data to identify patients with diabetes, hypertension, cardiovascular disease, cancer, or chronic respiratory disease[2]

Group potentially high-risk patients by ACO network to create actionable concentrations[3]



Top Ten ACOs by Percent of Beneficiaries w/ at least 4 of the Conditions

ACO Name	Count Beneficiaries w/ 4+ of the Conditions	Percent Beneficiaries w/ 4+ of the Conditions
USMM ACCOUNTABLE CARE PARTNERS, LLC	5,097	16.58%
Empire ACO LLC	1,972	14.72%
Balance ACO	1,762	14.65%
Genesis Healthcare ACO, LLC	11,006	13.31%
Accountable Care Coalition of New Jersey, LLC	729	13.00%
Antelope Valley ACO	822	12.42%
NJ Physicians ACO LLC	1,854	11.99%
American Health Alliance, LLC	1,345	11.95%
Michigan Pioneer ACO LLC	1,825	11.45%
Total Care ACO, LLC	1,867	11.21%

1. Zunyou Wu, MD, PhD1; Jennifer M. McGoogan, PhD1; Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China
2. Chronic conditions were calculated using CMS Chronic Condition methodology using 2018 claims data with respective lookback period for each condition.
3. ACO rosters are an estimation based on NPI level attribution and retrospective NextGen attribution. Reach out to CareJourney for details or accuracy comparisons.

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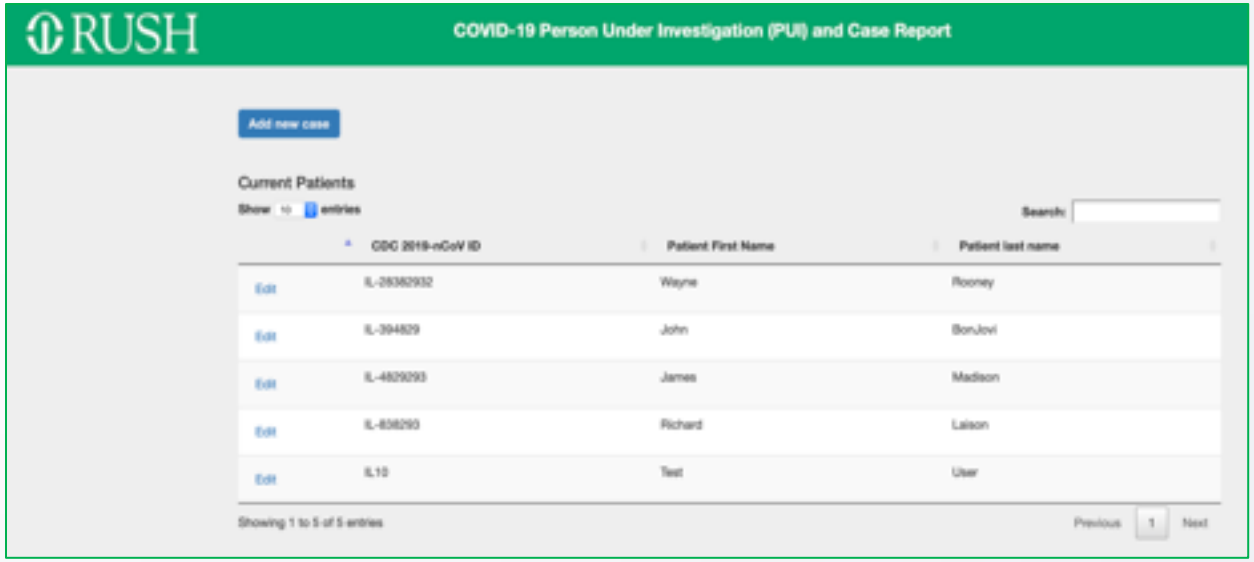
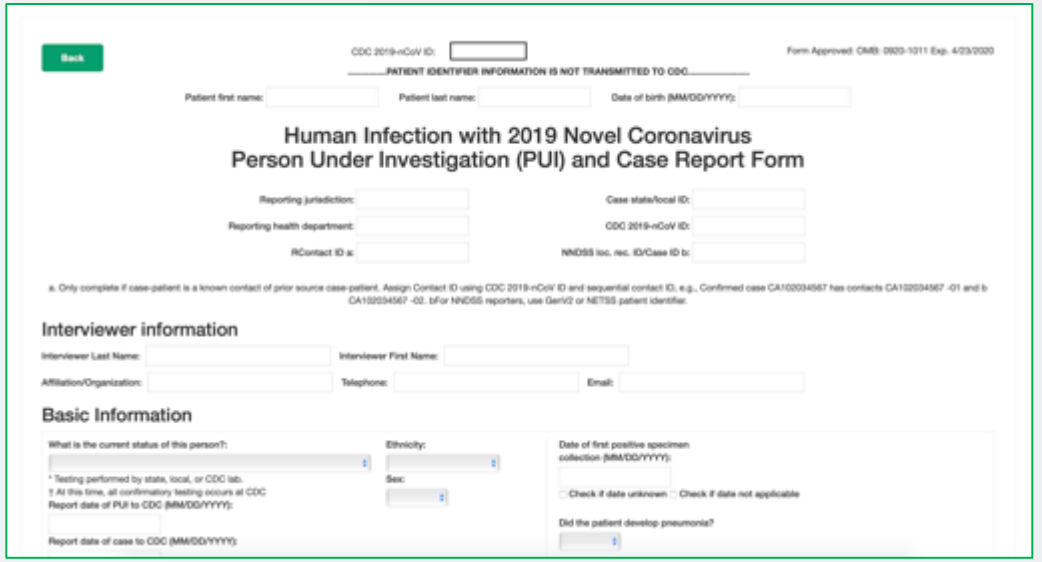
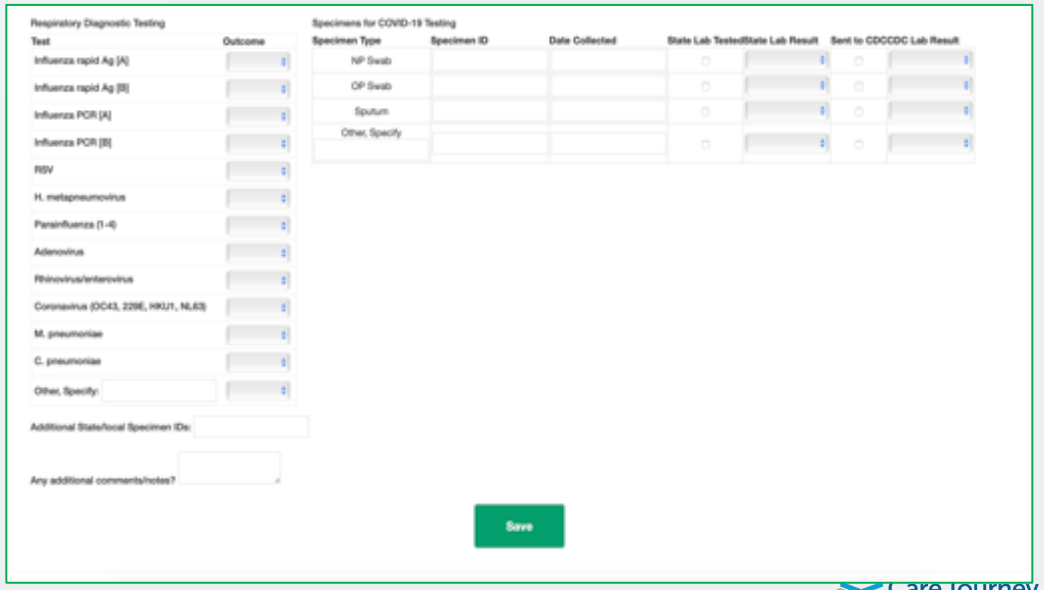
Automating Public Health Reporting







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Longitudinal Patient Registries @ Center

RUSH

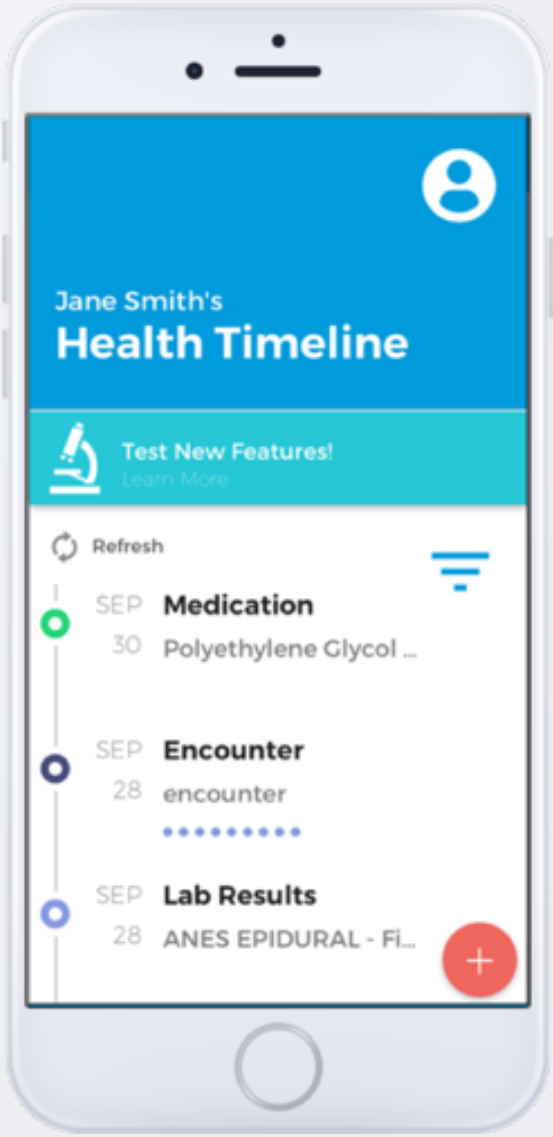
CONSENT/AUTHORIZATION FOR PARTICIPATION IN A RESEARCH STUDY

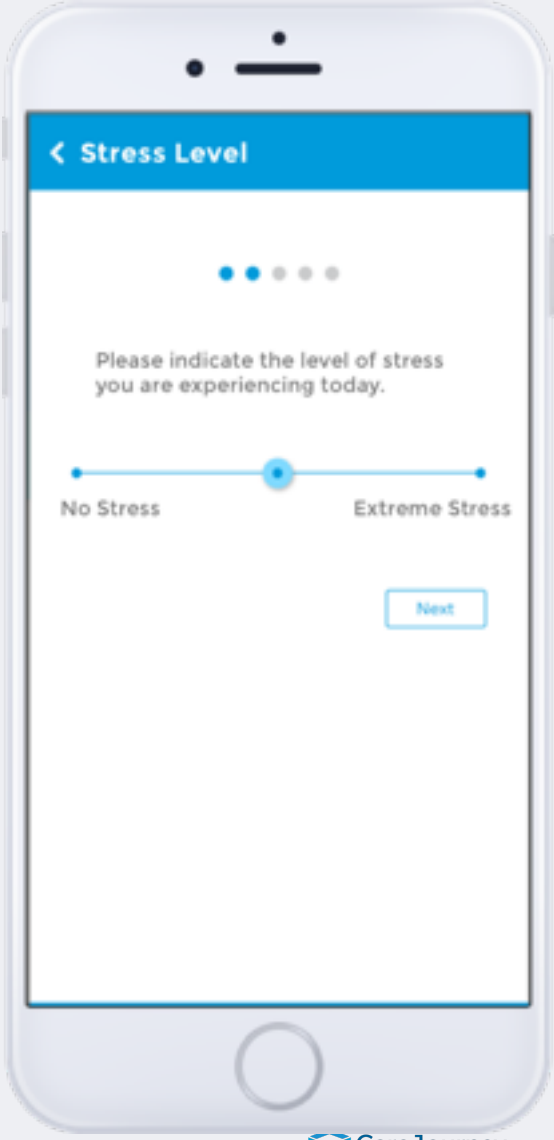
Site Principal Investigator:	Bala N. Hota, MD
Department:	Professor of Internal Medicine, Division of Infectious Diseases, Rush Medical College
Address and Contact Information:	600 S. Paulina St. Suite 143 Chicago, IL 60612, 312-942-5865, bala_hota@rush.edu
Protocol Title:	Longitudinal, Observational Registry of Persons Under Investigation for SARS-CoV2: The RUSH-COVID19 Study

Continuous Study Process

Surveys about your symptoms and health status will be sent to you via email or text throughout the duration of the follow-up period at the following frequency:

- Daily surveys for 10 days
- Weekly surveys for the next 6 weeks
- Monthly surveys thereafter





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The CareJourney Team is Ready to Help

Whether you are a current user of our Population Insights or Network Advantage tools, our platform allows you to identify providers and patients that meet criteria based on chronic conditions and high-need cohort.

For our members where we ingest your claims…

Use our patient profile and claims lists to identify patients who:

- May have chronic conditions based on claims data that put them at risk
- Are receiving, or recently received, care in an inpatient, skilled nursing facility, home health, or hospice setting
- Are identified as a high-need patient based on the high need high cost patient segmentation model developed by Ashish Jha and team

For our members using our national Medicare FFS license…

Use our provider and practice group profiles to identify providers who:

- Have a high prevalence of patients with chronic conditions based on claims data that put them at extra risk
- Have a high prevalence of high-need patients based on the high need high cost patient segmentation model developed by Ashish Jha

Use our acute and post acute facility profiles to identify:

- Medicare volume over time for acute and post acute facilities in your region

Please do not hesitate to reach out to your daily Member Services contact with any questions on how to use the platform to find the dashboards or data of interest

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The “Consumer-First” Delivery Reform Era

My Take on the Rules

1. Payers “Up First” to Publish, Demand Standardized Data
2. “Bulk” Requirements for Payer / Providers Extend Infrastructure
3. “All Data Elements” to Consumer Apps w/ IP Provisions
4. Balancing Privacy w/ a Consumer’s Right of Access
5. Open Data for Price, Quality Transparency

A Leadership Moment

Mount Sinai Accelerates Data-driven Discovery and Patient Care with New Chief Data Officer Role

Mount Sinai Accelerates Data-driven Discovery and Patient Care with New Chief Data Officer Role

#1) Payers “Up First,” Push Demand Signal

Institutions that support health records on iPhone (beta)

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 Health app.

We're working with more hospitals and clinics to support health records. Health institutions might have multiple hospitals and clinics that support health records, which are listed in the Health app.

Richard M. Adams, DPM - Family Foot Care (Texas)
https://www.richardadamsdpm.com

Community Health Systems (nationwide) - including AllianceHealth (OK), Bayfront Health (FL), Commonwealth Health (PA), Lutheran Health Network (IN), Merit Health (MO), Northwest Health (AR), Physicians Regional (FL), Tennova Healthcare (TN)
http://www.chs.net

Cone Health (North Carolina)
https://www.conehealth.com

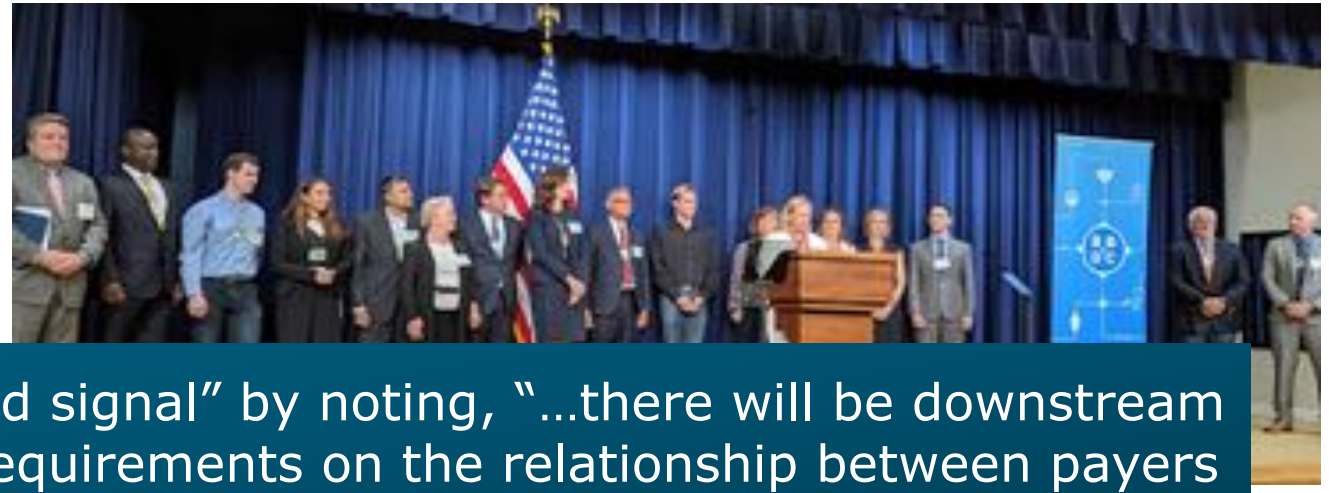
TECH

Big Tech is teaming up with health care companies to make it easier for you to see your health history

PUBLISHED TUE, JUL 30 2019 • 5:05 PM EDT | UPDATED AN HOUR AGO

Christina Farr
@CHRISSYFARR

SHARE



CMS envisions payers to drive “demand signal” by noting, “…there will be downstream impacts from the Patient Access API requirements on the relationship between payers and their contracted health care providers. It will be up to each payer's discretion to address whether this information needs to be included in contracts with providers."

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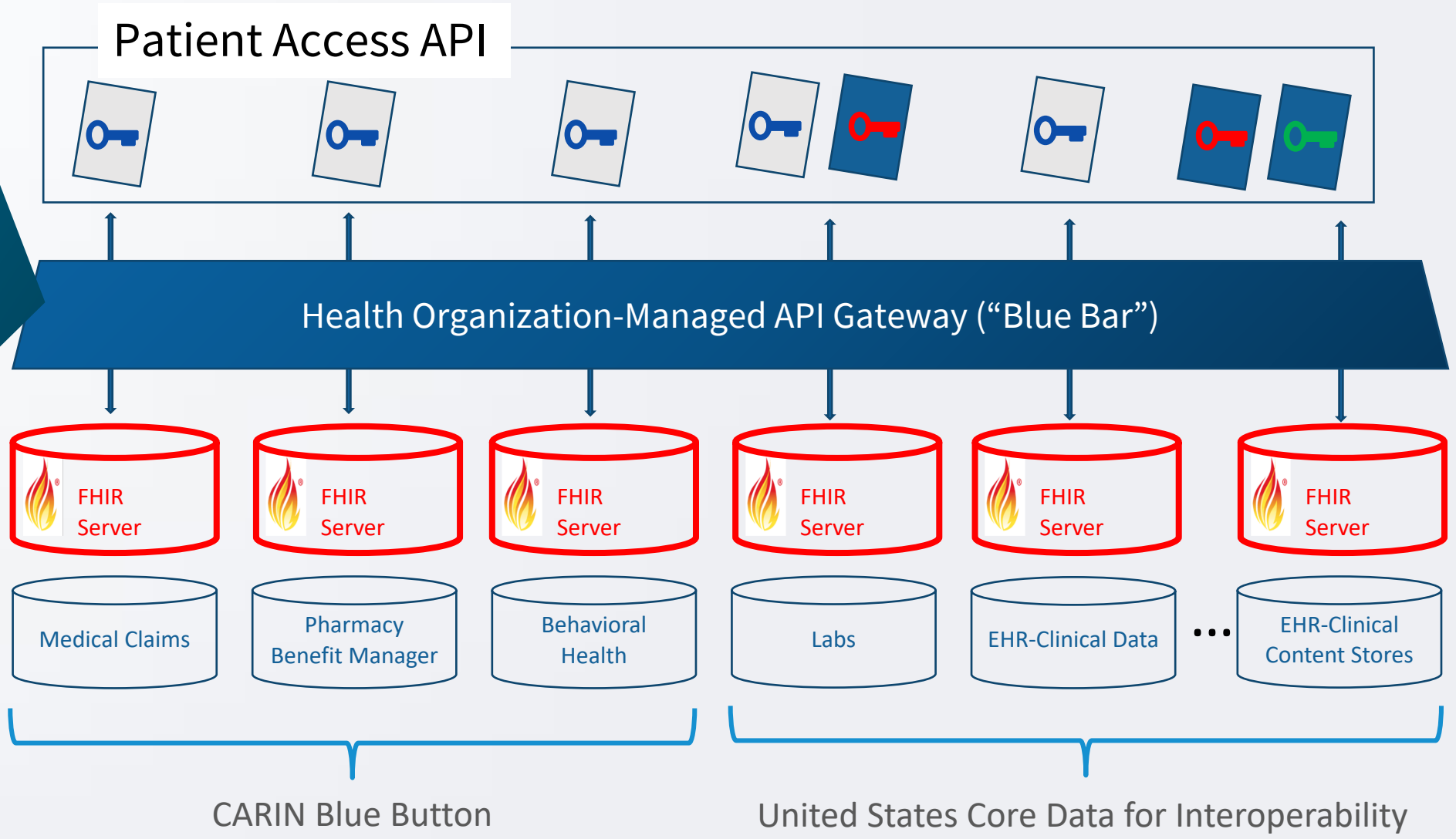
Importance of Data "De-Coupling" from EHR

ONC embraces "de-coupling" data access from EHR: "Certified API Developers must grant API Information Sources (i.e., health care organizations) the independent ability to permit API Users to interact with the certified API technology deployed by the API Information Source."



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#2) Extending FHIR for “Bulk” Applications

HL7 International

The Standard

The Official Blog of Health Level Seven® International

Leading Healthcare Stakeholders Commit to Real-World Testing of HL7’s FHIR Bulk Data Implementation Guide

Aug 7, 2019 10:38:22 AM / by Charles Jaffe, MD, PhD

Tweet Share Like 0 Share

On July 30, as part of the second Blue Button Developers Conference at the White House, a broad coalition of health systems, health plans, and other health IT stakeholders committed to real-world testing of the soon to be published HL7® FHIR® Bulk Data implementation guide (IG).

The announcement was made on stage by HL7 International CEO Dr. Charles Jaffe, later joined by Steven Posnack from ONC and Dr. Shafiq Rab of Rush University System for Health. More than 20 early adopters who have committed to advance this important use of HL7 FHIR were identified.

Source: https://blog.hl7.org/leading-healthcare-stakeholders-commit-to-real-world-testing-of-hl7-fhir-bulk-data-implementation-guide

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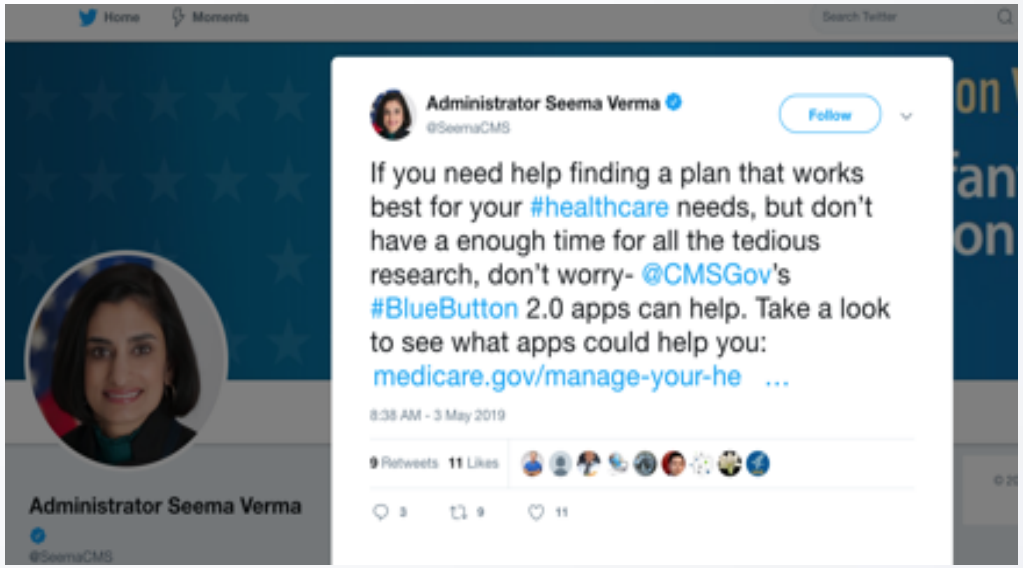
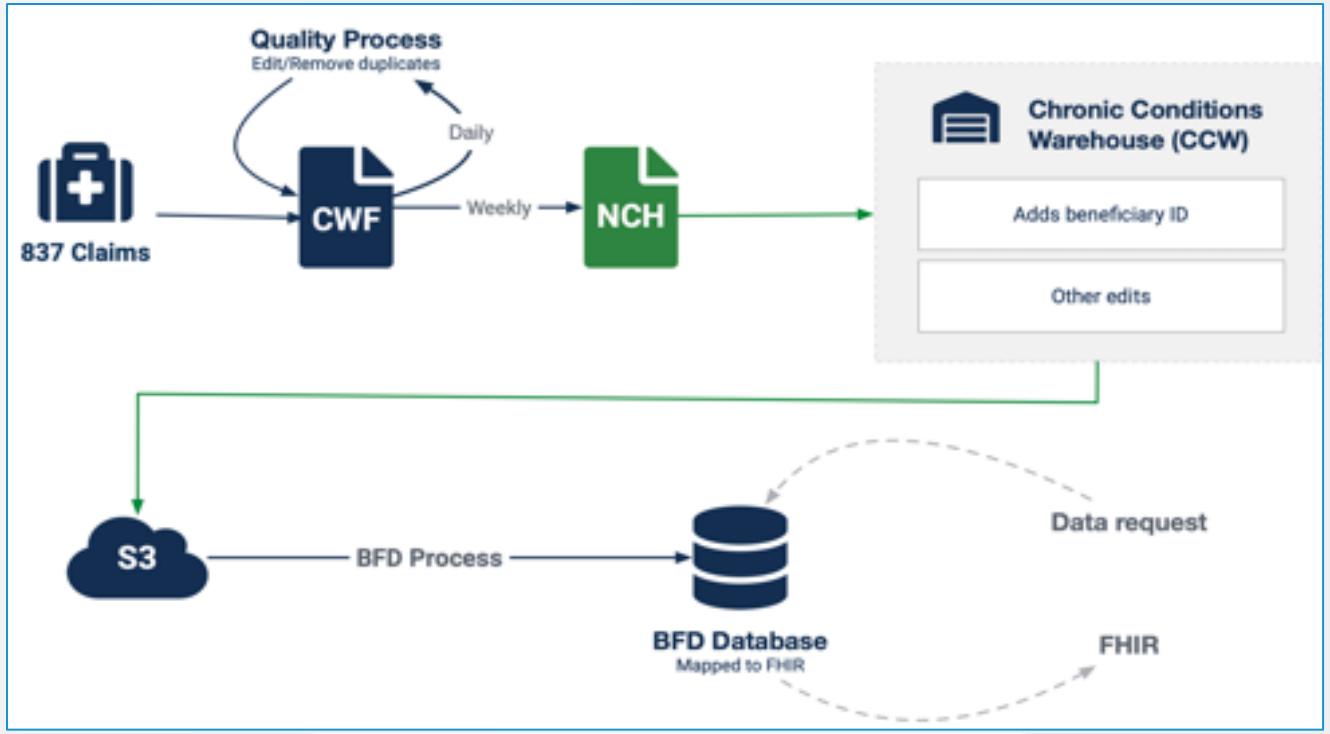
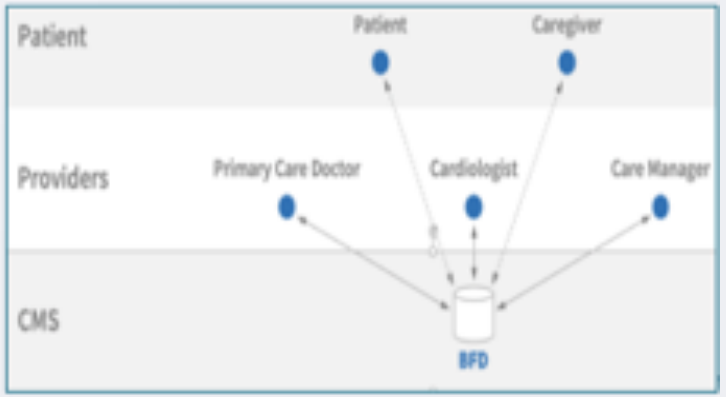
“Parallel” Processing Implementation





DATA AT THE POINT OF CARE API



Source: https://support.apple.com/en-us/HT208647 C

Source: https://support.apple.com/en-us/HT208647 ONC

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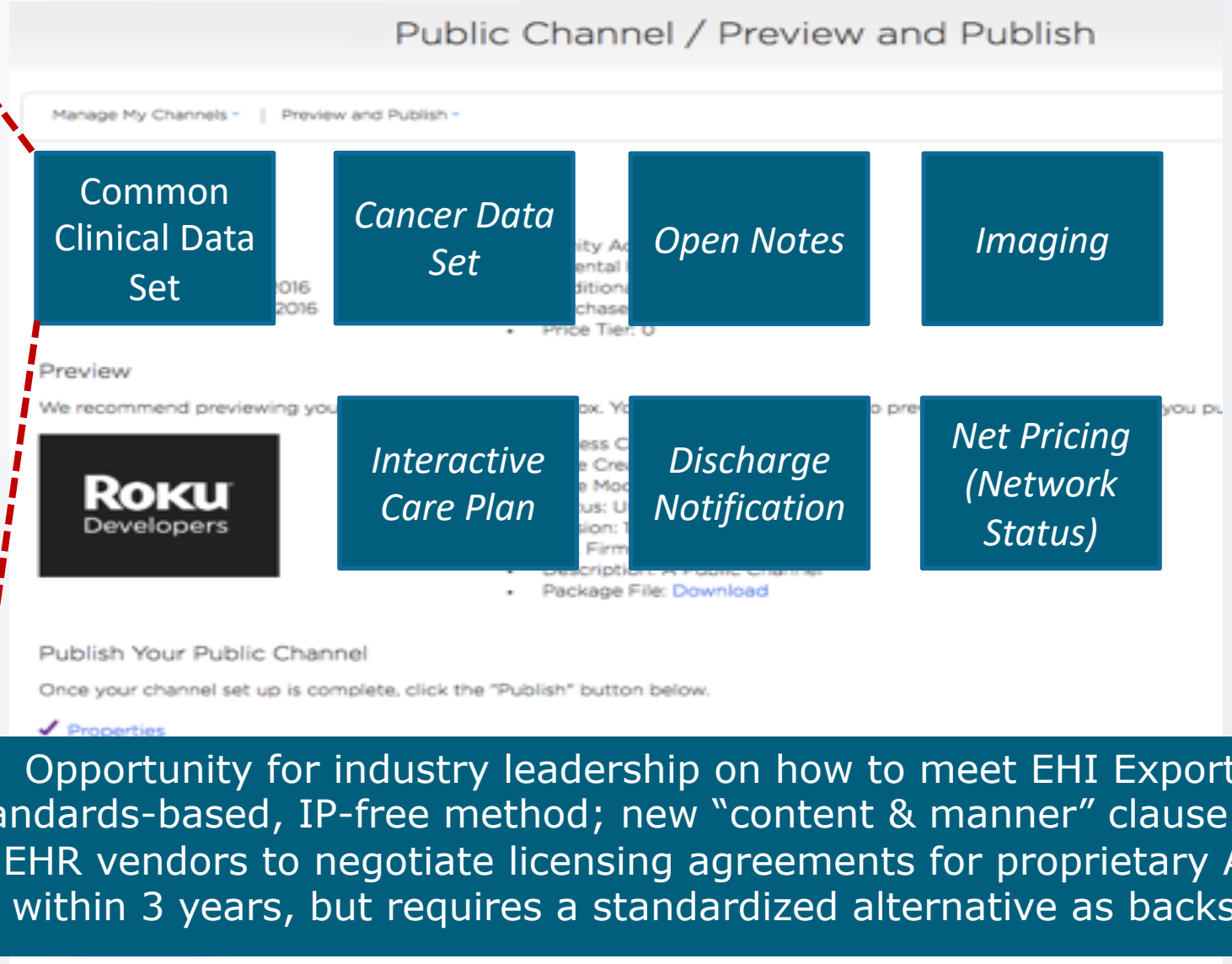
#3) A "Roku Moment" for Health Records

2015 Edition
Common Clinical Data Set

Patient name
Sex
Date of birth
Race
Ethnicity
Preferred language
Smoking status
Problems
Medications
Medication allergies
Laboratory tests
Laboratory results
Vital signs
Procedures
Care team members
Immunizations
Unique Device identifiers
Assessment and Plan of Treatment
Goals
Health concerns



Opportunity for industry leadership on how to meet EHI Export in standards-based, IP-free method; new "content & manner" clause allows EHR vendors to negotiate licensing agreements for proprietary APIs within 3 years, but requires a standardized alternative as backstop

Source: Roku; HL7 Argonaut Project

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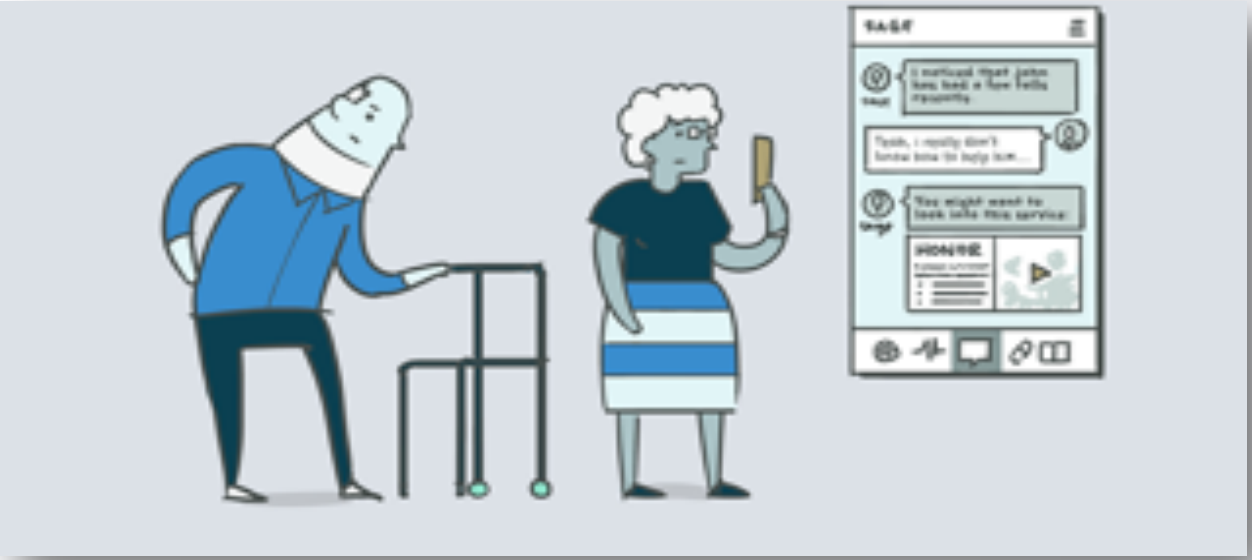
Atop the Agenda: Supplier or Fiduciary?



CMS proposes to include consumer "gainsharing" payments in MLR calculations when one chooses lower-cost, higher-value providers, starting in 2020; possible catalyst for consumer decision support applications.

Medicare's Blue Button apps

CAMBIA HEALTH SOLUTIONS

Project Seamless

Welcome to your everything-health guide, built just for you. Our new mobile experience organizes your health care, connects you to a dedicated care team and offers personal insights to help you live the best life possible.

Read more | Research | Appointments | Organize & Share

Website | Email
(855) 895-1158
Terms of service | Privacy Policy

Humana.

Humana

Humana's Rx Calculator uses your Medicare prescription data to quickly determine annual drug and premium costs when shopping for a Humana plan.

Read more | Find Plans | Organize & Share

Website | Email
Not provided
Terms of service | Privacy Policy

Prominence Health Plan

Prominence Health Plan

Make shopping for Medicare plans easier by using your previous doctors, pharmacies and Medicare prescription history to help inform and expedite your Medicare health plan shopping experience with Prominence.

Read more | Find Plans | Organize & Share

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(833) 630-3902
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RUSH

Rush University Medical Center

The MyRush Mobile is a platform for keeping patients connected to and engaged with Rush Health Network in order to easily and collaboratively manage their health and wellness.

Read more | Symptoms | Appointments | Organize & Share

Website | Email
(312) 563-6600
Terms of service | Privacy Policy

Source: Commonwealth Fund; https://www.federalregister.gov/d/2019-25011/p-281; CMS

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#4) Transformation @ Pace of Trust

Popular Latest

The Atlantic

TECHNOLOGY

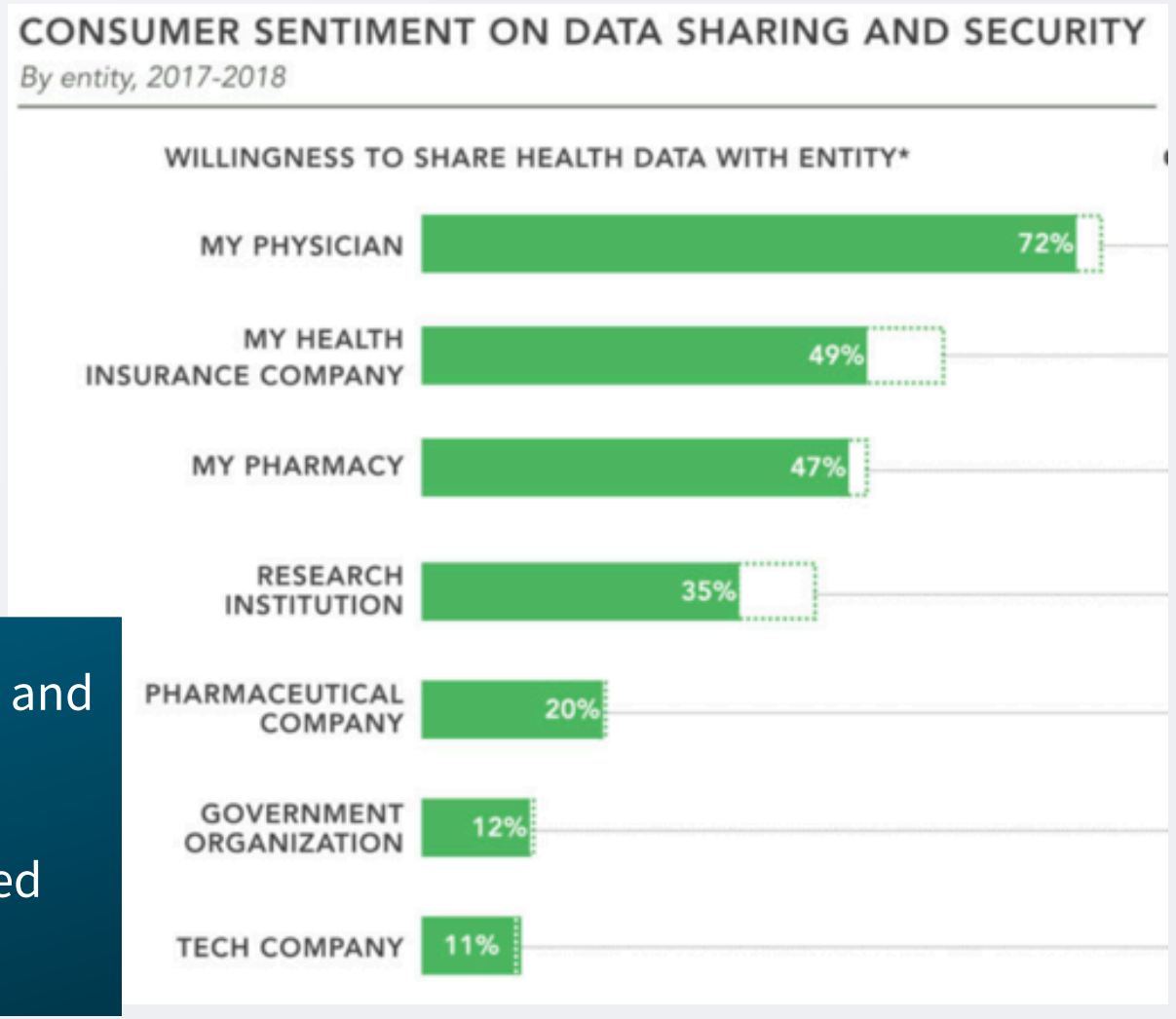
Google's Totally Creepy, Totally Legal Health-Data Harvesting

Google is an emerging health-care juggernaut, and privacy laws weren't written to keep up.

SIDNEY FUSSELL NOVEMBER 14, 2019

carin

"Beyond HIPAA:" Contractually bind third-party vendors and contractors to our privacy policies and prohibit use or disclosure of user information (including de-identified, anonymized or pseudo-nymized data) for any undisclosed purposes without express consent from the user.



Source: https://www.carinalliance.com/wp-content/uploads/2019/05/2019_CARIN_Code_of_Conduct_05082019.pdf; https://rockhealth.com/reports/beyond-wellness-for-the-healthy-digital-health-consumer-adoption-2018/

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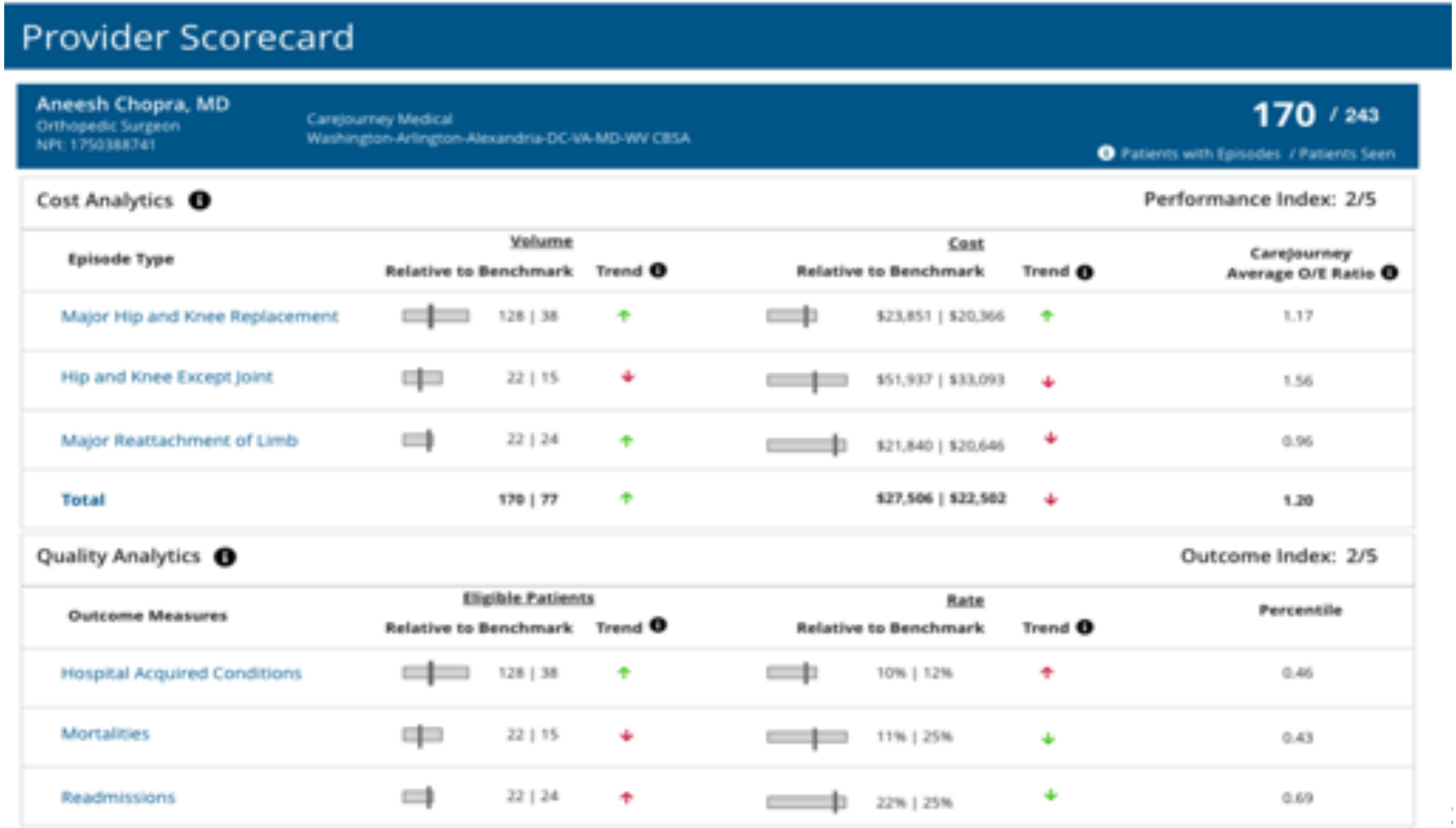
#5) Open Data for Physician Ratings



Provider Scorecard

Aneesh Chopra, MD
Orthopedic Surgeon
NPI: 1750388741

Carejourney Medical
Washington-Arlington-Alexandria-DC-VA-MD-WV CBSA

170 / 243
Patients with Episodes / Patients Seen

Cost Analytics

Performance Index: 2/5

Episode Type	Volume Relative to Benchmark	Volume Trend	Cost Relative to Benchmark	Cost Trend	Carejourney Average O/E Ratio
Major Hip and Knee Replacement	128 | 38	↑	$23,851 | $20,366	↑	1.17
Hip and Knee Except Joint	22 | 15	↓	$51,937 | $33,093	↓	1.56
Major Reattachment of Limb	22 | 24	↑	$21,840 | $20,646	↓	0.96
Total	**170 | 77**	↑	**$27,506 | $22,502**	↓	**1.20**

Quality Analytics

Outcome Index: 2/5

Outcome Measures	Eligible Patients Relative to Benchmark	Eligible Patients Trend	Rate Relative to Benchmark	Rate Trend	Percentile
Hospital Acquired Conditions	128 | 38	↑	10% | 12%	↑	0.46
Mortalities	22 | 15	↓	11% | 25%	↓	0.43
Readmissions	22 | 24	↑	22% | 25%	↓	0.69

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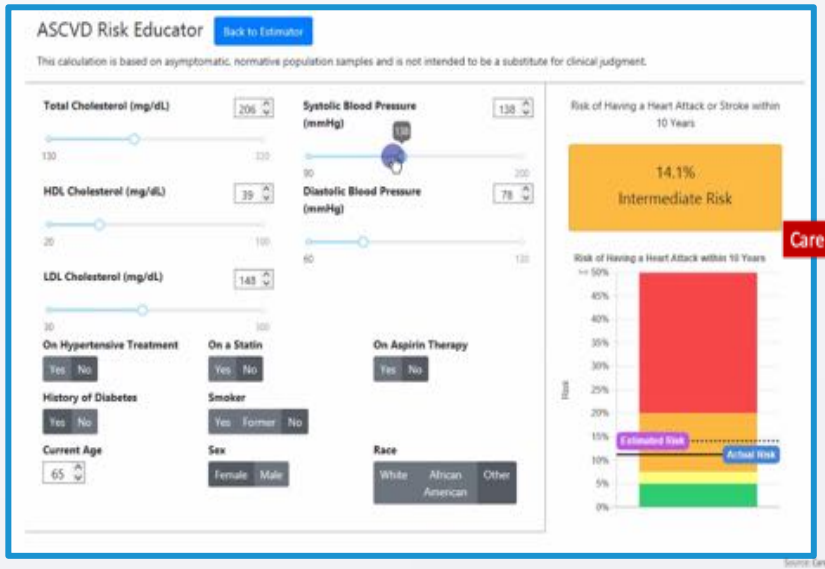
Source: CareJourney

The Era of "Substitutable" Apps

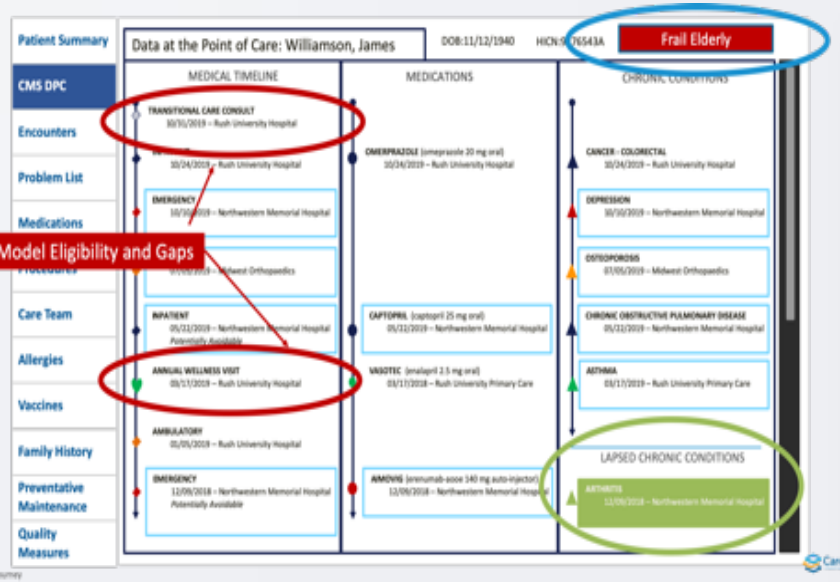
"Active Surveillance" Risk Calculators

Million Hearts®



Payer "Data @ Point of Care"

DATA AT THE POINT OF CARE API

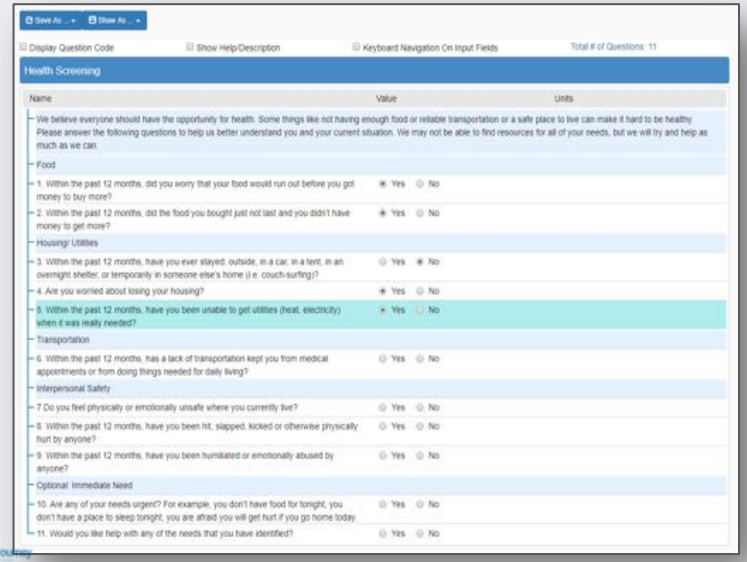


SDOH Screening Assessment

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

Screening Questions

Questions to identify unmet health needs.



Source: https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities; https://lhcforms.nlm.nih.gov/sdc; CMS; MedStar

CareJourney
A Hurich Analytics Company

Summary Timelines in the Final Rules

January 1, 2021

Medicare Advantage, Medicaid Managed Care Organizations, Medicaid and CHIP, Qualified Health Plans – must have a Patient Access API (Application Programming Interface) with care information available

Above plans must have a Provider Directory API available publicly with in-network providers and pharmacies (as applicable)

January 1, 2022

Beneficiaries must be provided five years of their claims (including pricing information) and clinical data (as available) from the plans

Payer to Payer data transfer for seamless transition for the patients. Payers must build standardized export processes to meet the new rules, it's advised to also build import processes to supplement their data with external sources

Key Points

Adoption of FHIR R4

USCDI for clinical information sharing

CPCDS/BB2.0 for claims information sharing

Standardized process for single patient and bulk transfer

Information blocking

Privacy and security best practices

Rule invokes bulk requirement