



Thank you for joining

**The presentation will
begin shortly**



Rise to Immunize® Monthly Webinar

Leveraging Artificial Intelligence to Increase Immunization Rates

Brisa Urquieta De Hernandez, PhD, Shawna Sharp, RN, and Karen O'Connor, RN, MSN, MBA,
CommonSpirit Health

March 21, 2024

Today's Webinar



Campaign Updates

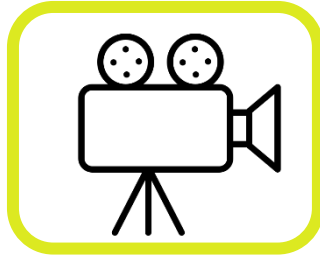
- Spotlight: [VaccineInformation.org](https://vaccineinformation.org)
- Annual Conference 2024
- RIZE Meet & Greet Breakfast
- Data submission reminder

Leveraging Artificial Intelligence to Increase Immunization Rates

- Brisa Urquieta De Hernandez, PhD
- Shawna Sharp, RN
- Karen O'Connor, RN, MSN, MBA

Q&A Session

Webinar Reminders



Today's webinar recording will be available the **week of 03/25**

- Will be sent via email
- Will be available on website



Ask questions during the webinar using the **Q&A feature**

- Questions will be answered at the end of the presentation

(RiseToImmunize.org → "Resources" → "Webinars")

March Spotlight: VaccineInformation.org



The screenshot shows the homepage of VaccineInformation.org. At the top left is the logo "VaccineInformation.org" with "from Immunize.org" in smaller text. To the right is a search bar with the placeholder text "Search Vaccine Information" and a magnifying glass icon. Below the search bar is a navigation menu with links for "Vaccine Basics", "Infants & Children", "Preteens", "Teens", "Adults", "Diseases", and "About Us". The main content area has a light blue background. On the left, it says "WHAT WE DO" followed by the text: "For parents and people of all ages, we provide **accurate and factual information** about vaccines and the diseases they prevent. Vaccination saves lives!". Below this text are two links: "Read more about what we do →" and "Visit our website for healthcare professionals →". On the right side of the main content area is a photograph of a smiling woman with dark hair wearing a yellow polka-dot top.





2024 AMGA ANNUAL CONFERENCE

April 9–12, 2024

Rosen Shingle Creek | Orlando, FL



The Super Future: Prepare Your Organization to Thrive in the AI Revolution

Jeremy Gutsche

CEO, Trend Hunter &
New York Times Bestselling Author



Leadership: Currency, Change, & Creating a Powerful Presence

The Dr. Scott Hayworth and the Honorable Dr.
Nan Hayworth Lecture

Carla Harris

Senior Client Advisor, Morgan Stanley



Election 2024 Perspectives

John Heilemann

Editor-in-Chief & Cofounder,
Recount Media



Mark McKinnon

Creator, Executive Producer &
Cohost,
Showtime's The Circus

amga.org/AC24

RIZE Meet & Greet Breakfast

Friday, April 12
7-8 am



Free RIZE branded totes available!





Data submission
deadline:

April 15

Today's Speakers



Brisa Urquieta De Hernandez, PhD,
System Director, Health
& Humankindness
Operations,
CommonSpirit Health



**Karen O'Connor, RN,
MSN, MBA,**
Digital & Innovation
Product Owner,
CommonSpirit Health



Shawna Sharp, RN,
System Director, Clinical
Transformation,
CommonSpirit Health

Leveraging Artificial Intelligence to Increase Immunization Rates

Presentors: Brisa Hernandez, Karen O'Connor, Shawna Sharp

**The presenters have NO
financial disclosure or
conflict of interest with the
presented material in this
presentation**

An Introduction to CommonSpirit Health

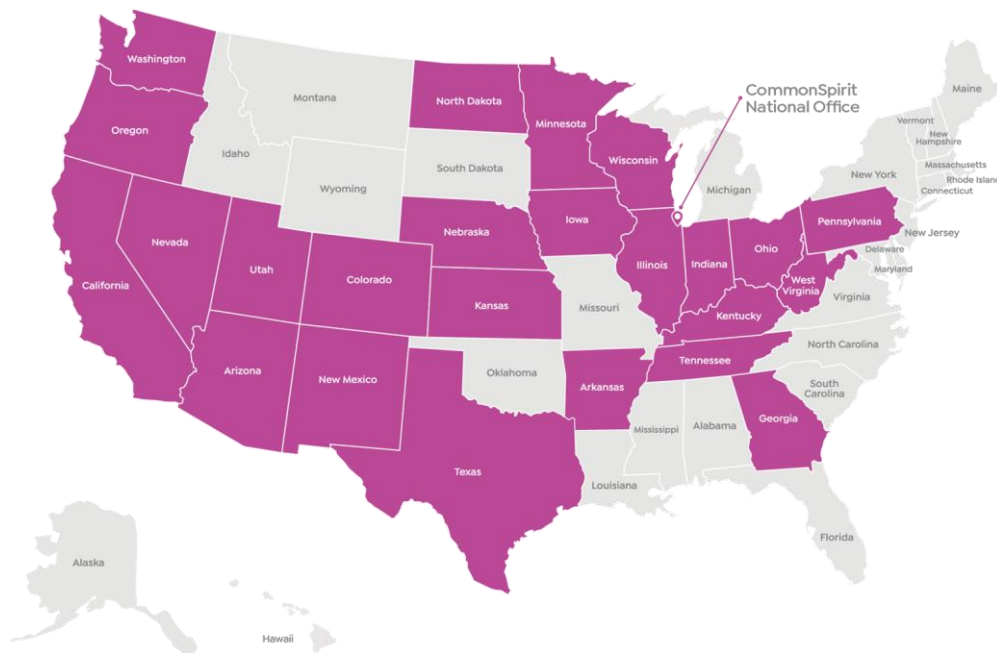
“As CommonSpirit Health, we make the healing presence of God known in our world by improving the health of the people we serve, especially those who are vulnerable, while we advance social justice for all.”



Where CommonSpirit Health lives:

CommonSpirit Health is a nonprofit, Catholic health system dedicated to advancing health for all people.

It was created in February 2019 by the merger of Catholic Health Initiatives and Dignity Health and is currently the largest Medicaid provider in the United States



What serving the common good looks like:

150,000
Health care workers



20+
million
patient
encounters

24
States in the U.S.



\$33.3
billion
in revenue

2,200
Care site



25,000+
physicians
and
advanced
practice
professionals

145
Hospitals



\$4.9
billion
in charity care
community
benefits*

*Includes cost of unreimbursed government programs (6/2022)

As of April 2023

Physician Enterprise: By The Numbers

**2.6
Million**

People Served
by Population Health
Last Year



6,000+
Employed Providers



14 Million
Patient Visits



25,000+

Physicians and
Advanced Practice Providers



22 Value Hubs

19,000
Employees



24 states
and Hundreds
of Communities
Served

30%
Net Patient Service
Revenue in
Value-based
Agreements



\$3 Billion
In Revenue



1,100
Ambulatory Sites

Nearly **3000**
Affiliate Trainees

We will transform health care by:



Improving access to high-quality care in our communities



Personalizing care for those with acute and chronic conditions



Advocating for people experiencing vulnerabilities



Bringing innovation, research, and technology to those we serve



Creating an inspired culture of excellence for our employees and physicians

Leveraging AI to address COVID-19 Vaccine Hesitancy with Marginalized Groups



we believe

Health justice
starts with
humankindness

AI in marginalized communities

ARTIFICIAL INTELLIGENCE AND COVID-19

Does “AI” stand for augmenting inequality in the era of covid-19 healthcare?

Artificial intelligence can help tackle the covid-19 pandemic, but bias and discrimination in its design and deployment risk exacerbating existing health inequity argue **David Leslie and colleagues**

BMJ: first published as 10

Global Edition Artificial Intelligence

How augmented intelligence can promote health equity

Training artificial intelligence models on more diverse image and data sets can augment decision-making, overcome knowledge gaps, and promote greater health equity and outcomes, says one expert.

By **Bill Siwicki** | February 24, 2022 | 11:46 AM

[f](#) [t](#) [in](#) [✉](#)

INFOGRAPHICS

Racial Bias in Health Care Artificial Intelligence

Health Equity
Published on: September 30, 2021.

ALGORITHMIC PREDICTIONS ACCOUNTED FOR 4.7X
more of the racial disparities in pain relative to standard measures

ARTICLE | Feb 15, 2022 | [in](#) [t](#) [✉](#)

Breaking down health disparities with AI: harnessing the possibilities of better data and analytics through artificial intelligence, for COVID-19 and beyond

The time is now: Overcoming implicit bias in health care

Posted in: [Perspectives](#) ⌚ 4 minute read time

Dr. Alisahah Jackson, Vice President of Population Health Innovation and Policy shares three ways health systems and physicians can address implicit bias in health care.

COVID-19 Vaccine Outreach Program

- Partnership with Deloitte Health Equity Institute
- Implementation of the “Equitable COVID Vaccine Outreach: Patient Stratification Tool”
- Integration of GetWell Virtual Patient Navigation solution
- Two CommonSpirit Health markets- Central Coast, CA and Little Rock, AR with local physician champions

Virtual Patient Navigation Solution

Partnering with GetWell

- Patients sent a text message that they are eligible to receive the vaccine.
- Patients can then sign up for the vaccine via the link provided.
- In the event that the patient cannot register on their own or other barriers arise a navigator engages the patient to assist via text messages or phone call
- Language services available



Preliminary Findings

- Bidirectional engagement in Spanish speaking population was 5% higher than the general group, but this group also had highest % of people who reported not being vaccinated yet
- Self-reported vaccination rate also lower in 65+ group, so opportunity to support
- Self-reported vaccination rate was highest among the Black population

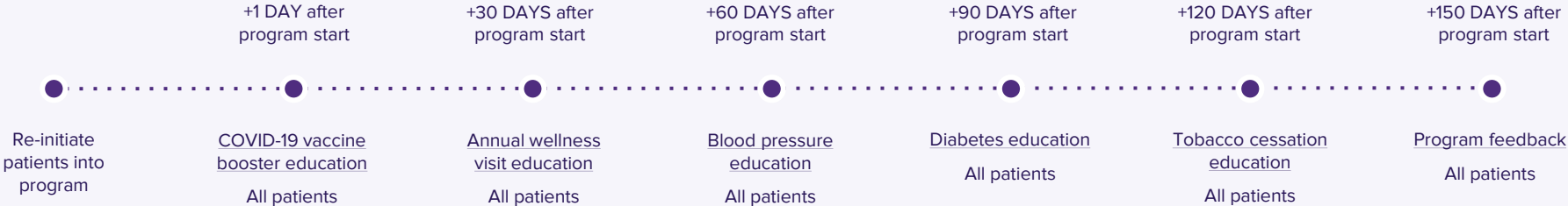
Phase 2

- Leverage “trust” developed with patients that did not opt-out
- Tool to re-engage in preventive care practices
- Provide educational information and call to action
- Assess changes in utilization

Little Rock Workflow



Scope:
All patients who received vaccine outreach in Little Rock who did not opt-out of text communications.
Program would be largely automated, with staff to monitor 'off-script' responses.





Hi, [NAME]! This is CHI St. Vincent. High blood pressure increases your risk of heart disease. **A healthy lifestyle can help you prevent high blood pressure. Staying active and eating healthy are two things you can do. Learn more here:** <https://www.nhlbi.nih.gov/health/heart-healthy-living>

Talk to your healthcare provider if you have questions or concerns.

Lessons Learned

- Local context is important when designing AI interventions, need to be flexible (i.e. new variants; vaccine mandates)
- Physician champions are critical to the success
- Engaging diverse stakeholders in design
- Data definitions and accessibility to assess impact

Leveraging AI and BOTS to Improve Vaccination Rates

Using AI and Bots in the Clinical Space.....



Artificial intelligence (AI)

Determines when and how to perform automated workflows using EHR data.



Automation

Performs automated workflows via RPA by clicking into EHR fields, typing notes or uploading documents exactly like staff would at much higher levels of speed.



Patient engagement

Maximizes patient, provider and staff engagement with automated workflows.



Notable **finds** a patient's upcoming visit in the EHR



Notable **prepares personalized digital intakes** for the patient



Notable **sends** the patient the digital intakes via a **text or email**



BOTS vs AI

BOTS - A specific application or program that performs automated tasks. BOTS can leverage AI technologies to enhance their capabilities.

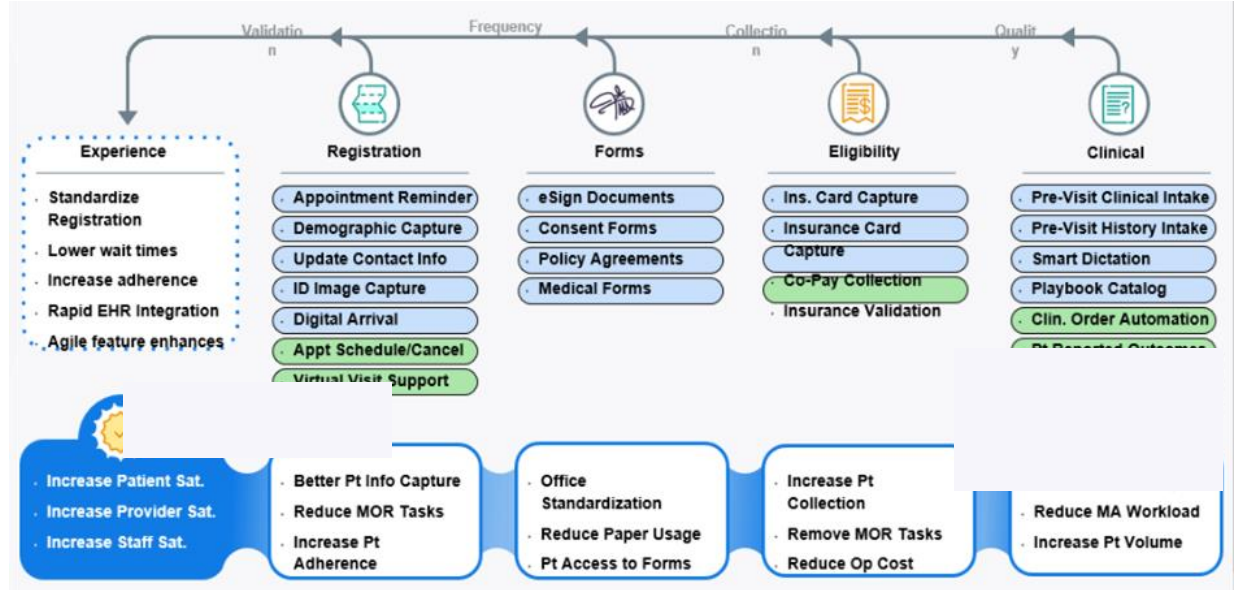
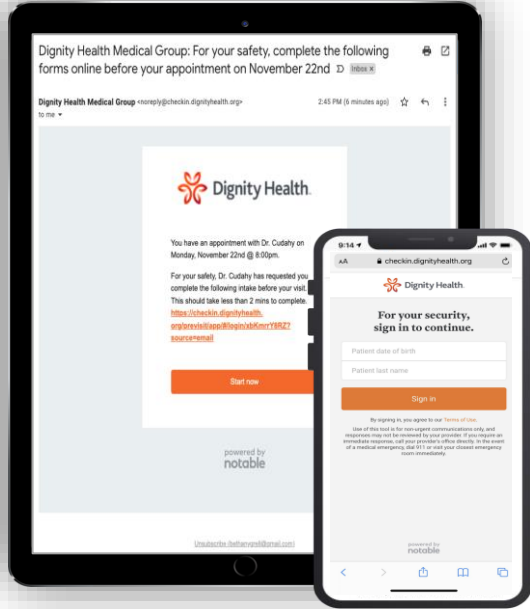
- Capable of text only commands, inputs and outputs
- Work on predetermined rules and flow
- Understand and respond only to text based commands
- Require reconfiguration for new updates or flow revisions
- Navigation-based, non-responsive beyond what was programmed

AI - the broader field of creating machines or systems capable of intelligent behavior, which can include but goes beyond the functionality of bots.

- Understands both text and verbal commands, inputs and outputs
- Continuously learning based on interactions with users
- Highly scalable



Notable Platform Experience



Ambulatory Pre-Visit Patient Experience

- Available in English and Spanish
- Log in with Last Name and Date of Birth
- All data obtained from patient populates the appropriate system
 - Registration - aIDX
 - Clinical - Cerner EMR
- Live with 750 providers in 300 practices across 3 states!
 - Average 200,000 experiences/month
 - Average 60-80% completion rate
 - Average Patient Satisfaction >95%



Drive patient loyalty

Deliver customization at scale with consumer-grade experiences

Reduce denials

Ensure accurate and complete patient registration data

Expand staff capacity

Eliminate busywork so staff can deliver world-class care

Decrease provider burnout

Delegate repetitive tasks to digital assistants

Enhancements to Support Vaccination

- Leveraged bot technology for mass vaccination clinics
 - Communication re: upcoming mass vaccination dates/times
 - Presented patient with questions regarding vaccine reactions then presented consent for digital/electronic signature
 - Bots documented responses and saved consent to EMR
 - Patients vaccinated elsewhere had EMR updated



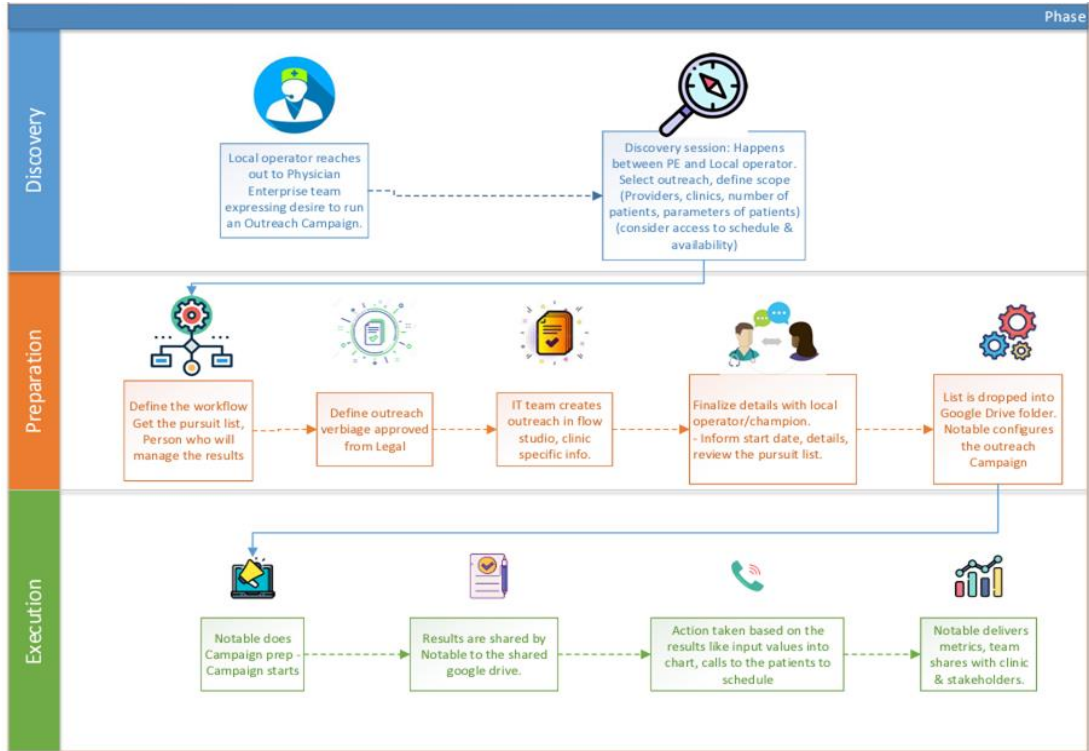
Enhancements to Support Flu Vaccination

- Addition to the Pre-Visit Experience
 - From October to April
 - For scheduled appointments without documentation of current flu vaccine, patients were asked their interest in obtaining vaccine at upcoming visit
 - Response documented in EMR
 - 45 day pause after patient declines



Care Gap Outreaches

- Asynchronous from appointments
- Curated pursuit list based on defined criteria
- Sent via text and email
- Include educational links from EMMI (Wolters Kluwer)
- Branching logic based on patient responses
- Responses reviewed by clinical team and acted upon as defined in planning process



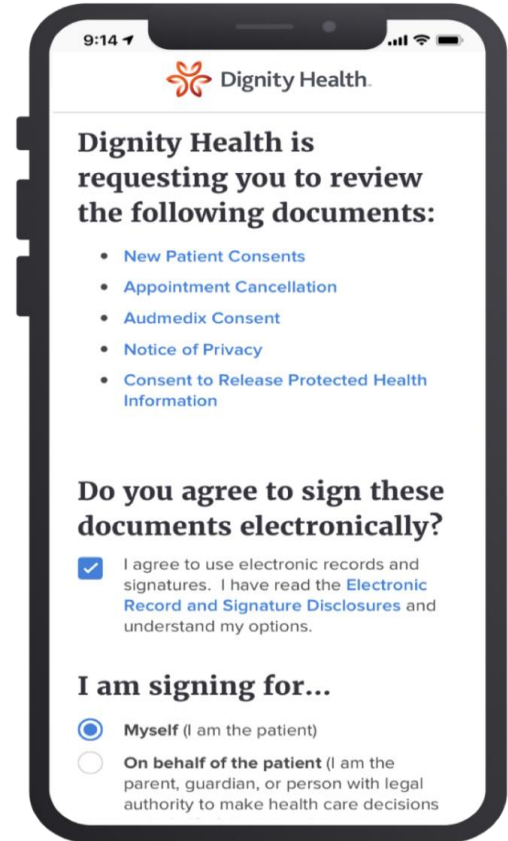
2023-24 Flu Season Metrics

- 116,141 patients contacted via targeted outreaches
- 345,038 patients received as part of their pre-visit experience for scheduled appointments
- 121,241 patients received the flu shot across the ministry



Future Plans

- Order placement into EMR by BOT after patient indicates interest in the pre-visit experience
- Flu vaccine consent inclusive of screening criteria will be presented to patients for e-signature and uploaded to EMR
- Improved metrics to evaluate impact and analyze across markets
- Evaluating feasibility to translate to additional languages
- Increase efforts aimed at pediatric population



Thank you!
Any questions?





Upcoming webinar:
**Important RIZE Campaign
Updates!**

When: Thursday, April 18 at 2pm ET

Questions?



Submit your questions using the **Q&A feature** at the bottom of the screen

