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
• 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

(RiseToImmunize.org → “Resources” → “Webinars”)

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

- Questions will be answered at the end of the presentation
March Spotlight: VaccineInformation.org

For parents and people of all ages, we provide **accurate and factual information** about vaccines and the diseases they prevent. Vaccination saves lives!

Read more about what we do →
Visit our website for healthcare professionals →
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
RIZE Meet & Greet Breakfast

Friday, April 12
7-8 am

Free RIZE branded totes available!
Data submission deadline: April 15
Today'sSpeakers

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.”
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:

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care workers</td>
<td>150,000</td>
</tr>
<tr>
<td>States in the U.S.</td>
<td>24</td>
</tr>
<tr>
<td>Care site</td>
<td>2,200</td>
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<tr>
<td>Hospitals</td>
<td>145</td>
</tr>
<tr>
<td>Patient encounters</td>
<td>20+ million</td>
</tr>
<tr>
<td>Revenue</td>
<td>$33.3 billion</td>
</tr>
<tr>
<td>Physicians and advanced practice professionals</td>
<td>25,000+</td>
</tr>
<tr>
<td>Charity care community benefits*</td>
<td>$4.9 billion</td>
</tr>
</tbody>
</table>

*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
- **19,000** Employees
- **22** Value Hubs
- **30%** Net Patient Service Revenue in Value-based Agreements
- **24** states and Hundreds of Communities Served
- **25,000+** Physicians and Advanced Practice Providers
- **$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
Health justice starts with humankindness
AI in marginalized communities

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.

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.

The time is now: Overcoming implicit bias in health care

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.

- **Re-initiate patients into program:**
  - +1 DAY after program start

- **COVID-19 vaccine booster education**
  - All patients
  - +30 DAYS after program start

- **Annual wellness visit education**
  - All patients
  - +60 DAYS after program start

- **Blood pressure education**
  - All patients
  - +90 DAYS after program start

- **Diabetes education**
  - All patients
  - +120 DAYS after program start

- **Tobacco cessation education**
  - All patients
  - +150 DAYS after program start

- **Program feedback**
  - All patients
  - +30 DAYS after program start
  - +60 DAYS after program start
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%
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.