Welcome!

- All lines are muted, so please ask your questions in Q&A
- For technical issues, chat to the ‘Technical Support’ Panelist
- Please actively participate in polling questions that pop up on the lower right-hand side of your screen

We will get started shortly!
Digital Health Equity Breast Cancer Screening

April 27, 2021

Sarah de Ramirez, MD, MPH, MSc
OSF Healthcare
Making Health Care Better Together

Hospital Quality Improvement

Welcome from all of us!

Collaborators:
Alabama Hospital Association
Alliant Quality
Comagine Health
Georgia Hospital Association
KFMC Health Improvement Partners
Konza
Sarah de Ramirez, MD, MPH, MSc

Vice President and Chief Medical Officer,
Clinical Innovation
OSF Innovation
OSF HealthCare
Learning Objectives

• Learn Today:
  – Define a data driven approach to selecting a project that focuses on meaningful health inequity
  – Describe the use of breast cancer disparity data and the way in which a hospital system may approach disparity reduction using digital technology

• Use Tomorrow:
  – Collect and stratify patient demographic data to reduce health disparities in a selected patient population, e.g. readmissions for heart failure, colorectal screening
### Health Disparities questions in HQIC initial assessment

<table>
<thead>
<tr>
<th>Health Disparities</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Training, Collection and Stratification</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Hospital provides workforce training regarding the collection of self-reported patient demographic data</td>
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<tr>
<td>2. Hospital uses a self-reporting methodology to collect demographic data from the patient and/or caregiver</td>
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<tr>
<td>3. Hospital stratifies patient safety and/or outcome measures using patient demographic data</td>
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<tr>
<td><strong>Interventions and Communication of Findings</strong></td>
<td></td>
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<tr>
<td>4. Hospital implements interventions, e.g. performance improvement teams and projects, to resolve differences in patient outcomes</td>
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<tr>
<td>5. Hospital uses a reporting mechanism, e.g. equity dashboard, to communicate outcomes for various patient populations</td>
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</tbody>
</table>
By 2050, "Minorities" will comprise the majority of the U.S. population. *1

Minority births now comprise the majority according to recent Census data. *2

Hispanics, Asians and Blacks/African American populations will grow at faster rates than other racial/ethnic groups. *1

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Rationale

• Population health and new payment structures hold health systems accountable for partial or full risk for the health of every patient served
• Need to consider the financial risk associated with allowing disparities in health outcomes to continue
• Estimation of total cost of racial/ethnic disparities
  – $82 billion in 2009
  – $126 billion in 2020
  – $353 billion in 2050
• Similar costs exist for all disparities (geographic, language, age, etc)

Equality vs Equity

Health equity means helping people be the healthiest they can be. It also means getting rid of inequalities, or unfair differences, in how people are given health care. These inequalities are also known as health disparities.

• **Equality** means treating everyone the same to achieve the same result. However, this approach only works if everyone is starting from the same status. Not all individuals start from the same status.

• **Equity**, on the other hand, is giving people what they need in order to achieve the same result. It’s commonly referred to as ‘leveling the playing field.’ Equity is needed before attaining true equality.
Health Equality vs. Health Equity

**Equality**

*Equality* means treating everyone the same to achieve the same result. However, this approach only works if everyone is starting from the same status. Not all of our members start from the same status. In fact, they experience *health inequities*, or avoidable differences in health outcomes.

**Equity**

*Equity*, on the other hand, is giving people what they need in order to achieve the same result. It’s commonly referred to as ‘leveling the playing field.’ Equity is needed before attaining true equality.
OSF Health Care
Digital Health Equity Breast Cancer Screening

Speaker
Sarah de Ramirez, MD, MPH

Please note that the views expressed by the conference speakers do not necessarily reflect the views of the American Hospital Association.
OSF Healthcare
OSF HealthCare Hospitals

**EASTERN REGION**
1. OSF HealthCare Saint James—John W. Albrecht Medical Center
   Pontiac, Illinois
2. OSF HealthCare St. Joseph Medical Center
   Bloomington, Illinois
3. OSF HealthCare Heart of Mary Medical Center
   Urbana, Illinois
4. OSF HealthCare Sacred Heart Medical Center
   Danville, Illinois

**WESTERN REGION**
9. WELCOME! Perry Memorial Hospital
   Princeton, Illinois
10. OSF HealthCare Saint Luke Medical Center
    Kewanee, Illinois
11. OSF HealthCare St. Mary Medical Center
    Galesburg, Illinois
12. OSF HealthCare Holy Family Medical Center
    Monmouth, Illinois
13. OSF HealthCare Saint Anthony’s Health Center
    Alton, Illinois

**NORTHERN REGION**
5. OSF HealthCare St. Francis Hospital & Medical Group
   Escanaba, Michigan
6. OSF HealthCare Saint Anthony Medical Center
   Rockford, Illinois
7. OSF HealthCare Saint Paul Medical Center
   Mendota, Illinois
8. OSF HealthCare Saint Elizabeth Medical Center
   Ottawa, Illinois

**CENTRAL REGION**
14. OSF HealthCare Saint Francis Medical Center
    Peoria, Illinois
    OSF HealthCare Children’s Hospital of Illinois
    Peoria, Illinois

**METRO REGION**
15. OSF HealthCare Little Company of Mary Medical Center
    Evergreen Park, Illinois

**INDEPENDENT AFFILIATES**
- Illinois Valley Community Hospital, Peru, Illinois
- Rochelle Community Hospital, Rochelle, Illinois
- St. Margaret’s Hospital, Spring Valley, Illinois

FY20 Utilization. Data as of 9/30/20. Updated 2/5/21
OSF HealthCare by the Numbers

146 Locations, Including Hospitals
914 Employed Physicians
711 Advanced Practitioners
22,640 Mission Partners
266,014 Home Health Annual Visits
1,656,527 Outpatient Visits

2,200,519 Physician Enterprise Visits
80,250 Inpatient Admissions
3,065 Hospice Patients
909,705 Persons Served
$3.1B Net Revenue
CSI Team was formed

CSI Team was created and began forming, storming and norming around health equity and Social Determinants of Health.

Work Continued

CSI Team continued to conduct research and continued norming and performing. During this time the Screen and Connect questions were developed.

First Pilot

The first pilot started on September 3rd, 2019 with the 4 Pontiac area practices. In December of 2019 the optimizations were put into place with the pilot practices.

PHW Program and Continued Deployment

In January of 2020 the pilot spread to 5 additional practices in the Pontiac area. Screen & Connect questions spread into the Western region into 11 facilities during the Summer of 2020.

In the Fall it had spread into the Eastern region to 15 more facilities.

PHW Program

Pandemic Health Workers were born when the COVID-19 pandemic struck the United States. PHW’s provide the care, support and comforting assurance to clients in the safety of their own homes.

DHW Program and Final Deployment

The Screen and Connect questions will be deployed throughout the rest of the ministry in 2021. This will include 15 facilities in the Central region.

DHW Program

AHA and BCBS granted the HEAL Lab $75,000 to create a DHW program to encourage female patients to get a mammogram if they hadn’t within the last 2 years. The DHW’s completed intake into the program, scheduled mammograms, increased health literacy of breast health and followed up post-screening.

OSF CommunityCare

OSF CommunityCare is being developed by OSF Innovation to be used as an eCHR throughout the ministry and organizations outside OSF Healthcare.

OSF HealthCare

Equity Innovation Timeline
2019 CHNA Priorities Across All OSF HealthCare Hospitals

- Cancer - defined as incidence of breast, lung and colorectal cancer and cancer screenings
- Mental Health - defined as depression, anxiety and suicide
- Substance Use - defined as abuse of illegal and legal drugs, alcohol and tobacco/vaping use
Disparities in Breast Cancer

Breast Cancer Case Rate by County and Race/Ethnicity

<table>
<thead>
<tr>
<th>Race</th>
<th>Bureau County</th>
<th>Fulton County</th>
<th>Henry County</th>
<th>Knox County</th>
<th>McLean County</th>
<th>Peoria County</th>
<th>Tazewell County</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaska</td>
<td>164.00</td>
<td>142.00</td>
<td>126.60</td>
<td>141.20</td>
<td>144.70</td>
<td>133.00</td>
<td>194.10</td>
<td>198.60</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>135.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>97.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>124.00</td>
<td>142.00</td>
<td>126.60</td>
<td>141.20</td>
<td>144.70</td>
<td>133.00</td>
<td>194.10</td>
<td>198.60</td>
</tr>
</tbody>
</table>

Breast Cancer Death Rate by County and Race/Ethnicity

<table>
<thead>
<tr>
<th>Race</th>
<th>Bureau County</th>
<th>Fulton County</th>
<th>Henry County</th>
<th>Knox County</th>
<th>McLean County</th>
<th>Peoria County</th>
<th>Tazewell County</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaska</td>
<td>11.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>11.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>27.80</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Hispanic</td>
<td>11.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>15.70</td>
<td>37.20</td>
<td>18.40</td>
<td>14.60</td>
<td>21.10</td>
<td>18.00</td>
<td>19.60</td>
<td>20.50</td>
</tr>
</tbody>
</table>


Breast cancer mortality is 60% higher for Black women aged 45-69 than White women.

Late Stage: $120k lifetime treatment cost

Early Stage: $22k lifetime treatment cost
OSF Mammography Screening by Race

<table>
<thead>
<tr>
<th>County</th>
<th>% Rural</th>
<th>Age-Adjusted Breast Cancer Incidence Rate (cases per 100,000)</th>
<th>Percent of Cases with Late Stage</th>
<th>% Screened by Mammogram (White)</th>
<th>% Screened by Mammogram (Hispanic)</th>
<th>% Screened by Mammogram (Black)</th>
<th>% Screened by Mammogram (Asian)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fulton</td>
<td>60.03</td>
<td>46.00</td>
<td>31.4</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>Bureau</td>
<td>57.39</td>
<td>46.00</td>
<td>34.00</td>
<td>43.00</td>
<td>38.00</td>
<td>Unknown</td>
<td>Unknown</td>
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<tr>
<td>Henry</td>
<td>50.28</td>
<td>30.00</td>
<td>25.10</td>
<td>42.00</td>
<td>32.00</td>
<td>20.00</td>
<td>31.00</td>
</tr>
<tr>
<td>Knox</td>
<td>24.32</td>
<td>43.00</td>
<td>30.40</td>
<td>51.00</td>
<td>40.00</td>
<td>56.00</td>
<td>31.00</td>
</tr>
<tr>
<td>Tazewell</td>
<td>20.42</td>
<td>46.00</td>
<td>29.40</td>
<td>44.00</td>
<td>53.00</td>
<td>47.00</td>
<td>47.00</td>
</tr>
<tr>
<td>McLean</td>
<td>16.50</td>
<td>47.00</td>
<td>32.30</td>
<td>55.00</td>
<td>57.00</td>
<td>57.00</td>
<td>57.00</td>
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<tr>
<td>Peoria</td>
<td>14.65</td>
<td>49.00</td>
<td>34.10</td>
<td>46.00</td>
<td>38.00</td>
<td>47.00</td>
<td>47.00</td>
</tr>
</tbody>
</table>

Note: The table includes data on the percentage of rural population, age-adjusted breast cancer incidence rate, percentage of cases with late stage, and the percentage screened by mammogram for different races and Hispanic status.
OSF Mammography Rates by Payer Type

Income Impact on Mammography Rate Disparity by Location

Mammography Income driven Disparities range 15-25% across all OSF counties
Geographic Hot Spots in Screening Disparities
Primary Objective: Can digital/community-based interventions reduce the disparity in mammography rate/compliance?

- Question 1: Does the effectiveness of the interventions differ between income groups?
- Question 2: Do the study interventions reduce the disparity in mammogram rates between income groups?

Cohort: All women > 40 years w/o mamo for 2 years

Strategic Decision: Target all Managed Medicaid to achieve disparity reduction; use matched controls of commercial patients to learn if there are differences in how to target populations.
Workflow and Patient Journey

Arm 1 | Texting

Arm 2 | Texting + DHW Intervention

Arm 3 | Texting + DHW Intervention + Community Event

< Messages OSF HealthCare

Hi Kiara, this is OSF HealthCare following up on scheduling your mammogram. Start the new year with a screening that can save your life! Learn more about the screening process and find support available for you: {MicrositeLink}

Hi Stacy, you’re invited to start the new year with a special event to get your mammogram and other free resources! OSF HealthCare is providing community shuttles and a Kids Corner to help you: {MicrositeLink}
Progress to Date

Texting Series Complete: 12/14 (1,175 texts), 1/25 (1,132 texts), 2/8 (1,014 texts). Total: 3,321 texts
- 88% of texts reached an existing working cell phone.
- Total opt outs: 36 people refused consent

Microsite Views Complete: 677 microsite views to date
- 58% of those that received texts, took action to view education on site

Online Scheduling at Microsite as a result of texting: 294 mammograms scheduled online to date
- 44% of those that went to the site scheduled a mammogram online
- Only 8% consented to DHW education program online (most didn’t click to consent)

DHW Outreach: 390 patients contacted to date (out of 931 not already scheduled)
- ~21% agree to join DHW education program after being contacted
- Contacts ongoing for next 600 patients
- 140 mammograms completed to date (12 masses identified, ~67% Medicaid)

Community Engagement Events: March & April
Study Flow Chart

ACO Eligible Patients
No Mammogram N = 8,200

Aligned ACO Eligible Patients with Cell Phone #
No Mammogram N=4,511

Commercial
Total N = 8,626
No Mammogram N = 3,514

Commercial
Total N = 1,683
No Mammogram N = 670

Medicaid
Total N = 1,721
No Mammogram N = 997

Medicaid
Total N = 1,680
No Mammogram N = 957

Digital Tools Only
Medicaid No Mammogram N = 313
Commercial No Mammogram N = 218

DHW + Digital Tools
Medicaid No Mammogram N = 318
Commercial No Mammogram N = 237

All Interventions
Medicaid No Mammogram N = 326
Commercial No Mammogram N = 215
Success with Texting

3,322 texts sent from December 14, 2020 to February 8, 2021

**VIEW**
58.8%
This is defined as the percentage of patients that clicked into the microsite from the text message

**CONVERSION**
47.3%
This is defined as the percentage of patients that clicked to schedule in the microsite

**SCHEDULED**
9.8%
This is defined as the amount of patients that successfully scheduled a mammogram
Arm 1 Completed Mammograms

57% of those who acted based on text messaging alone were BCBS.
Roughly equal response.
86% received text messages
62% viewed education
27% enrolled in DHW program
Arm 3 Completed Mammograms

Race
- White
- Black
- Native Hawaiian
- Other

Payor Type
- BCBS
- Illini
- Molina

County
- Woodford
- Tazewell
- Peoria

Enrolled in PHW Program
- Enrolled
- Did Not Enroll

Attended Health Fairs
- Attended
- Did Not Attend

90% received text messages
58% viewed education
34% enrolled in DHW program
18% attended health fairs
Mammogram Success

- **Mammogram**: The patient received a mammogram that noted to have a suspicious right breast mass and axillary lymph node.

- **Texting**: A 65-year-old female who had not previously had a mammogram completed received a text message encouraging her to get a mammogram.

- **Biopsy**: The patient underwent a breast biopsy of both areas that resulted in an invasive ductal carcinoma with a positive lymph node for cancer.

- **Mastectomy**: The patient has met with her medical team and will undergo a mastectomy in the near future.

Patients Screened: 230

Patients identified as part of the study that successfully completed a mammogram.
CMS Equity Award Winners

• Novant Health (NC) 2018
  – Discovered a disparity in pneumonia readmission rates
  – Identified opportunities in the discharge process, patient support after discharge, comorbidities and mortality rate
  – Five work streams: discharge, population health, home visits, access to healthcare, and creating awareness
  – Between January and September 2017, the disparity for African American patients who were readmitted with a diagnosis for pneumonia was reduced by 50% (from 4% to 2%)

• Atrium Health (NC) 2020
  – Redesigned EMR by adding or improving questions on race, ethnicity, language preference and gender identity
  – Created a tool that stratifies data
  – Implemented a phone call campaign and worked with a Spanish-language newspaper to increase colorectal screenings for Hispanic males
  – From 2018 to 2019, reduced disparity by 62.7%
Case Studies

- Hospital organized a team (nursing, linguistic services, case management, providers and Patient and Family Advisory Council (PFAC) members) to pilot test the use of in-person interpreters at the point of discharge for all patients/families with limited English proficiency (LEP) for three months and monitor readmissions rates.

- Parkland Health (TX)
Ideas to Begin Your Plan-Do-Study-Act

• Ask CEO to sign #123 for Equity Pledge to Act
• Ask PFAC member to assist with data collection/self questionnaire
• Locate Community Health Assessment results
• Stratify by Social Determinants of Health (SDOH)
  – Safe housing, transportation, and neighborhoods
  – Income, education level, job opportunities
  – Access to nutritious foods and physical activity opportunities
  – Language and literacy skills
• Investigate grants and funding opportunities (e.g. Robert Wood Johnson Foundation)
2. Community Health Assessment and Improvement Plans [https://www.cdc.gov/publichealthgateway/cha/plan.html](https://www.cdc.gov/publichealthgateway/cha/plan.html)
6. AHA Institute for Diversity and Health Equity [https://ifdhe.aha.org/](https://ifdhe.aha.org/)
Key Takeaways

• Learn Today:
  – Define a data driven approach to selecting a project that focuses on meaningful health inequity
  – Describe the use of breast cancer disparity data and the way in which a hospital system may approach disparity reduction using digital technology

• Use Tomorrow:
  – Collect and stratify patient demographic data to reduce health disparities in a selected patient population, e.g. readmissions for heart failure, colorectal screening

How will this change what you do? Please tell us in the poll…
Email us at HospitalQuality@AlliantQuality.org or call us 678-527-3681
### HQIC Goals

#### Behavioral Health Outcomes & Opioid Misuse
- ✓ Promote opioid best practices
- ✓ Decrease high dose opioid prescribing and opioid adverse events in all settings
- ✓ Increase access to behavioral health services

#### Patient Safety
- ✓ Reduce risky medication combinations
- ✓ Reduce adverse drug events
- ✓ Reduce *C. diff* in all settings

#### Quality of Care Transitions
- ✓ Convene community coalitions
- ✓ Identify and promote optimal care for super utilizers
- ✓ Reduce community-based adverse drug events
Upcoming Events

May 25, 2021  2:00 p.m. EDT

Public Health Emergencies/Antibiotic Stewardship: Anti-biogram for COVID Patients in the ICU

Featured Speakers
East Alabama Medical Center (EAMC)
Thank you for joining us!
How did we do today?
Making Health Care Better Together

Hospital Quality Improvement

This material was prepared by Alliant Quality, the quality improvement group of Alliant Health Solutions (AHS), the Hospital Quality Improvement Contractor (HQIC) under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication No. AHSQIC-TO3H-21-527

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